TECHNICAL MANUAL

FLIGHT-TYPE DISHMACHINES

Master/Clipper RC

Includes Installation, Operation, and Maintenance Instructions

Insinger Machine Company
6245 State Road
Philadelphia, PA 19135-2996

800.344.4802
Fax 215.624.6966
www.insingermachine.com

Thank you for purchasing this quality Insinger product.

On the space provided below please record the model, serial number and start-up date of this unit:

Model:_____

Serial Number:_____

Start-Up Date:_____

When referring to this equipment please have this information available.

Each piece of equipment at Insinger is carefully tested before shipment for proper operation. If the need for service should arise please contact your local Authorized Insinger Service Company.

A Service Network Listing is provided on our web site, www.insingermachine.com or call Insinger at 800-344-4802 for your local authorized servicer.

For proper activation of the *Insinger Limited Warranty* a SureFire™ Start-Up & Check-Out Service should be completed on your machine. Refer to the Introduction section in this manual for an explanation of Insinger SureFire™ Start-Up & Check-Out Program.

Please read the Insinger Limited Warantyt and all installation and operation instructions carefully before attempting to install or operate your new Insinger product.

To register your machine for warranty by phone, fax or the internet or for answers to question concerning installation, operation, or service contact our Technical Services Department:

TECHNICAL SERVICE CONTACTS	
Toll-Free	**800-344-4802**
Fax	**215-624-6966**
E-mail	**service@insingermachine.com**
Web	**www.insingermachine.com**

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Insinger

Item #_____

CLIPPER RC

AUTOMATIC THREE TANK RACKLESS CONVEYOR DISHWASHER

CSI - 11400

DESIGN

Automatic conveyor, flight type three tank dishwasher with recirculating prewash, wash and rinse and fresh water final rinse. Capacity is 8,812 dishes per hour with a conveyor speed of 6.8 ft. per minute. Designed for left or right hand conveyor travel, as specified.

STANDARD EQUIPMENT

- Exclusive CrossFire® Wash system (patented)
- Tank heat: 60 KW electric immersion heaters or steam injectors
- Capillary thermometers for prewash, wash, rinse and final rinse
- Final rinse pressure gauge
- Vacuum breaker on all incoming water lines
- Manifold cleanout brush
- S/S frame, legs and feet
- Inspection and cleanout doors
- Automatic tank fill
- Low water protection
- Detergent connection provision
- Door safety switches
- SureFire™ Start-Up and Check-Out Service
- Top mounted NEMA 12 control panel
- Steam booster
- Simplified scrap screen design
- Exhaust connections with adjustable dampers
- Standard frame drip proof motors
- Conveyor reversing switch
- Polypropylene belt with removable rack sections
- Conveyor safety stop bar
- Override switch for de-liming
- Interior work lights

OPTIONAL ACCESSORY EQUIPMENT

- ❑ Stainless steel steam coil tank heat
- ❑ Pressure reduction valve and line strainer
- ❑ Stainless steel belt with removable rack sections
- ❑ Single point electrical connection: motors, controls, and heaters
- ❑ Security package
- ❑ Electric booster
- ❑ S/S front enclosure panel
- ❑ S/S panels all sides
- ❑ Insulated hood and doors
- ❑ Totally enclosed motors
- ❑ 5 inch wide conveyor section for washing flatware

UL NSF

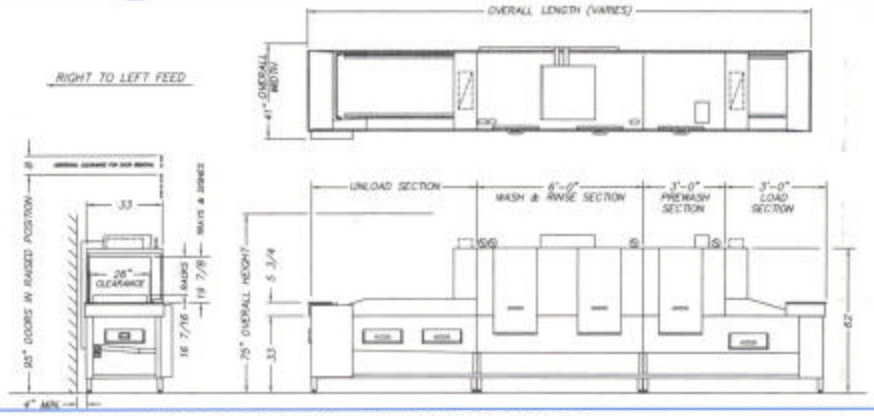
Insinger

6245 State Road
Philadelphia, PA 19135-2996
215-624-4800
215-624-6966 FAX
800-344-4802
www.insingermachine.com

SUREFIRE™ START-UP & CHECK-OUT SERVICE

Insinger CLIPPER RC

CSI - 11400



Note: For all rough in connections see Installation and Layout Detail Drawing.

SPECIFICATIONS

CONSTRUCTION - Hood and tank constructed of 16 gauge 18-8 type 304 S/S. Hood unit of all welded seamless construction. S/S frame, legs and feet. All internal castings are non-corrosive nickel alloy, bronze or S/S investment.

DOORS - Three extra large die formed 18-8 type 304 S/S front inspection doors riding in all S/S channels. A triple ply leading edge on the door channels made of S/S with no plastic or nylon sleeves or liners used. Two intermediate S/S door-safety stops on each door.

CONVEYOR - Polypropylene or S/S rack sections on S/S belt with Hi-D rollers and removable rack sections. Conveyor drive system includes large speed reducer with cut gears operating in oil bath and frictionless, trouble-free overload release system. Dishware conveyed automatically through all washing and rinsing systems and is driven by an independent 1/2 HP motor. A stop bar sits at the end of the unload section. This will shut off the conveyor if any ware reaches the bar. A reversing switch is provided to assist in removing jams in the belt.

PUMPS - Centrifugal type "packless" pump with a brass petcock drain. Construction includes ceramic seal and a balanced cast impeller on a precision ground stainless steel shaft. All working parts mounted as an assembly and removable as a unit without disturbing pump housing. Two 2 HP motors, 1725 RPM - wash and rinse; and 1½ HP - 1725 RPM prewash, standard horizontal C-face frame, drip proof, internally cooled with ball-bearing construction.

CONTROLS - Top-mounted control cabinet, NEMA 12 rated with heat insulation provided between hood and control cabinet, housing motor controls and overload protection, transformer, contactors and all dishwasher integral controls. All controls safe low voltage 24 VAC.

ENERGY SAVER - Electric photo-eye automatically operates the final rinse solenoid only when ware passes, saving water and energy. The photo eye also activates an adjustable timer control. If no ware passes during the set time, the machine shuts down.

SPRAY SYSTEM - Spray arms are made of 18-8 type 304 stainless steel pipe. Spray assemblies removable without the use of tools.

PREWASH - Upper and lower manifolds. One manifold above with 3 power wash arms, each designed with 7, 6 &7 high pressure action cleansing slots and one manifold below with 3 power wash arms, each designed with 4 high pressure action cleansing slots. The slots are precision milled for water control, producing a fan spray. Prewash arms are fillet welded to the S/S manifold.

WASH - Upper and lower manifolds & the CrossFire® Wash System (patented). One manifold above with 3 power wash arms designed with 7, 6 &7 high pressure action cleansing slots and one manifold below with 3 power wash arms, each designed with 6 high pressure action cleansing slots. The slots are precision milled for water control producing a fan spray. Wash arms are fillet welded to the S/S manifold. The CrossFire® system provides 4 horizontally spraying high pressure nozzles.

RINSE - Upper and lower manifolds. One manifold above with 3 power rinse arms, designed with 7, 6 &7 high pressure action cleansing slots and one manifold below with 3 power rinse arms, each designed with 6 high pressure action cleansing slots. The slots are precision milled for water control, producing a fan spray. Rinse arms are fillet welded to the S/S manifold.

FINAL RINSE - Four nozzles above and multiple orifices below threaded into schedule 40 S/S pipes. Nozzles produce a fan spray reducing water consumption, maximizing heat retention.

DRAIN - Drain valves externally controlled. Overflow assembly with skimmer cap is removable without use of tools for drain line inspection. Heaters protected by low water level control.

Capacity per hour	Tank capacity	Motor size	Electric usage	Steam consumption at 20 psi min.	Final rinse peak flow at 20 psi min.
8,812 dishes 500-1,000 meals	24 gals. (prewash) 27 gals. (wash) 30 gals. (rinse)	1½ hp (prewash) 2 hp (wash) 2 hp (rinse) 1/2 hp (conveyor)	60 kw tanks 27 kw booster 40° rise 45 kw booster 70° rise	218 lbs./hr tank 79 lbs./hr rem. booster 40° rise 138 lbs./hr rem. booster 70° rise	3.7 gals./min.

Final rinse consumption at 20 psi min.	Exhaust hood requirement	Peak rate drain flow	Shipping weight
222 gals./hr.	750 CFM Load 750 CFM Unload	23 gals./min.	3000 lbs. (21')

Current draw amps	Steam	Electric w/o booster
208/3/60	24.1	196.7
240/1/60	n/a	n/a
240/3/60	21.9	170.8
380/3/50	13.2	107.0
480/3/60	10.9	85.1

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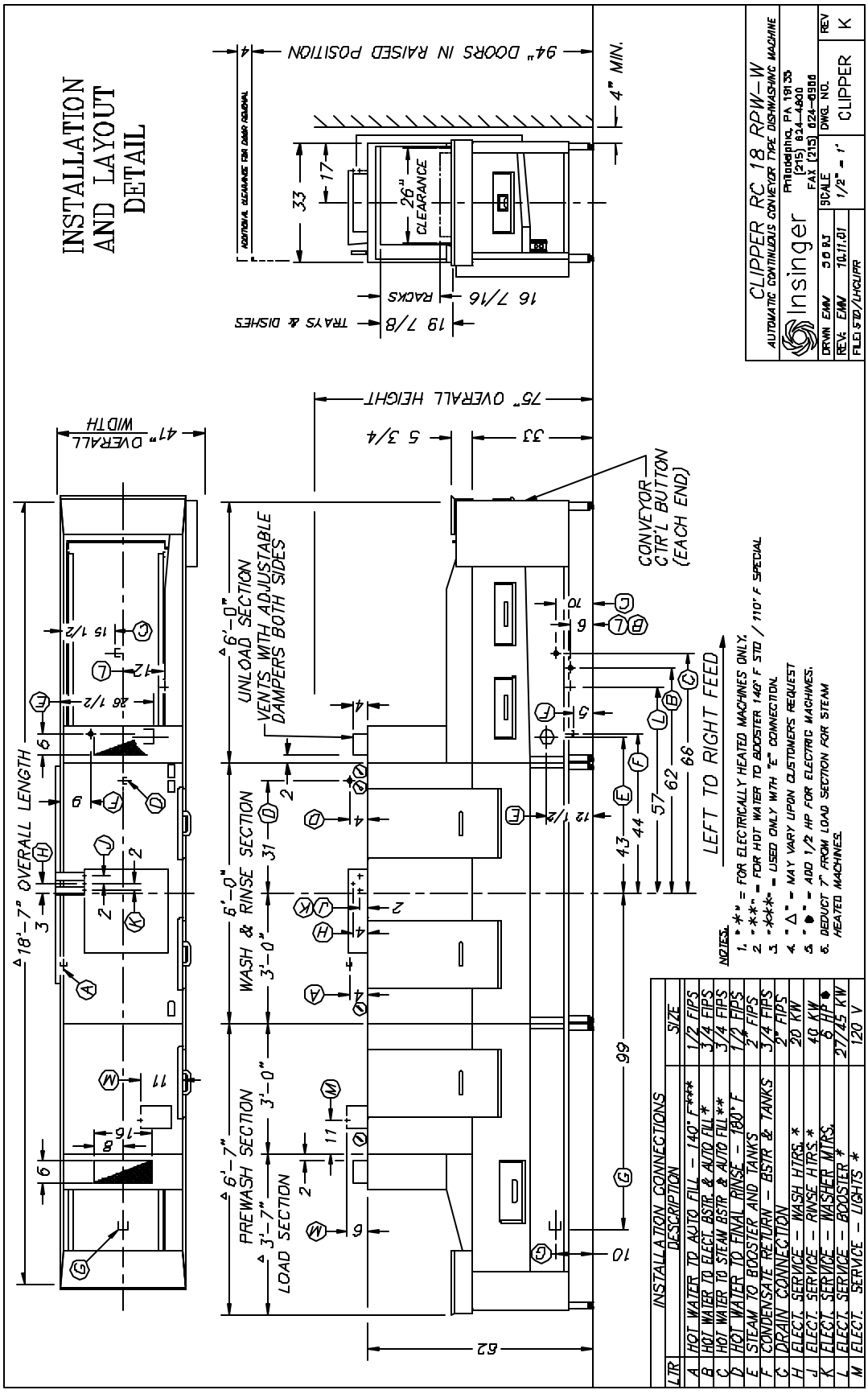
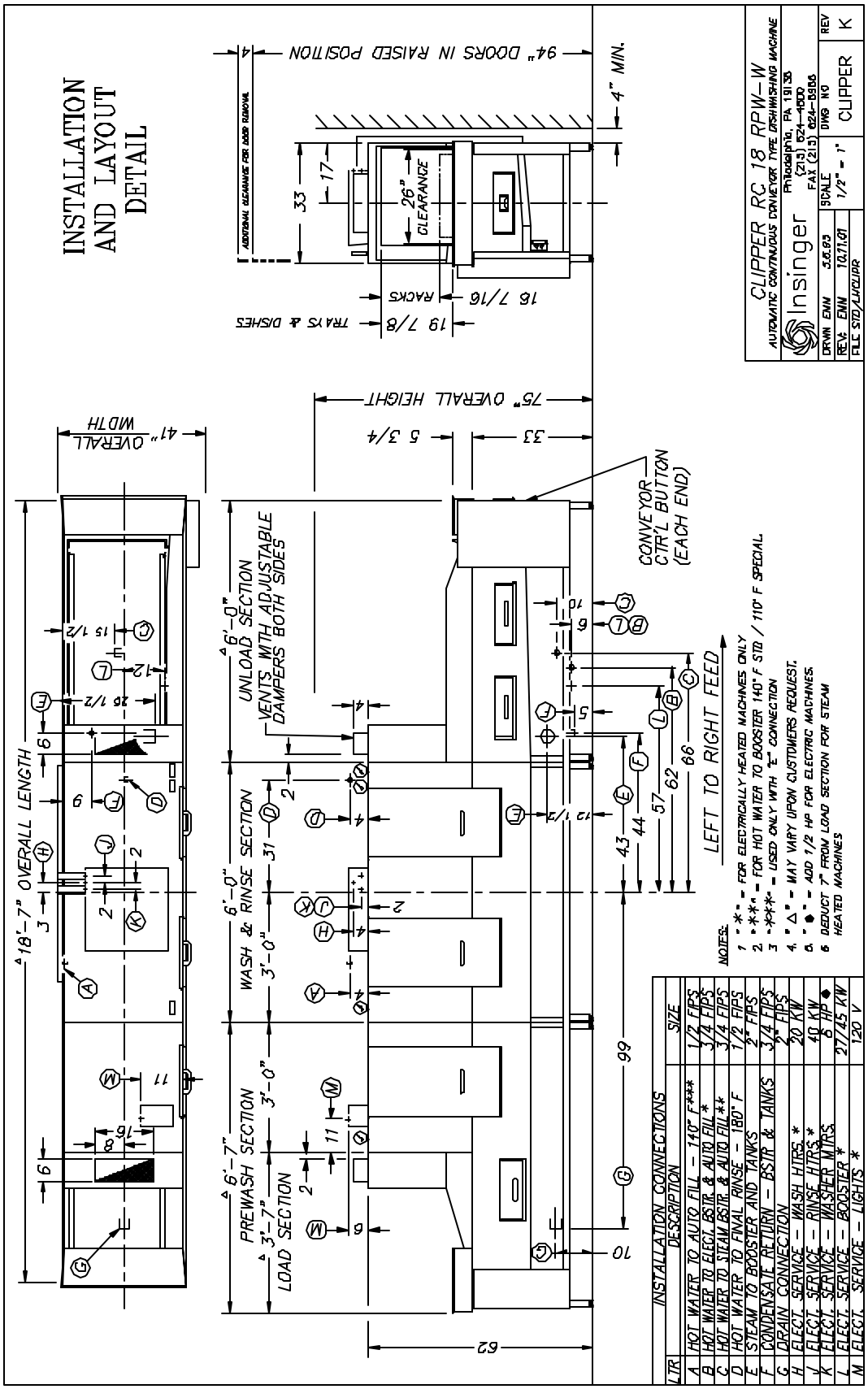
AutoQuotes


INSTALLATION AND LAYOUT DETAIL
CLIPPER RC 18 RPW-W
AUTOMATIC CONTINUOUS CONVEYOR TYPE DISHWASHING MACHINE
Insinger
Philadelphia, PA 19135
(215) 831-4800
FAX (215) 624-6906
DRWN EMW 3.6.93
REV: EMW 10.11.01
FILE: STD/LHCLIPR
SCALE 1/2" = 1'
DWG. NO. CLIPPER
REV K
94" DOORS IN RAISED POSITION
4" MIN.
33
17
26" CLEARANCE
16 7/16 RACKS
19 7/8 TRAYS & DISHES
75" OVERALL HEIGHT
5 3/4
33
41" OVERALL WIDTH
18'-7" OVERALL LENGTH
UNLOAD SECTION
VENTS WITH ADJUSTABLE DAMPERS BOTH SIDES
6'-0"
WASH & RINSE SECTION
3'-0"
PREWASH SECTION
3'-7"
LOAD SECTION
CONVEYOR CTR'L BUTTON (EACH END)
LEFT TO RIGHT FEED
99
82
68
62
57
44
43
12 1/2
10
6
5
2
NOTES.
1. "*" = FOR ELECTRICALLY HEATED MACHINES ONLY.
2. "**" = FOR HOT WATER TO BOOSTER 140° F STD / 110° F SPECIAL
3. "***" = USED ONLY WITH "E" CONNECTION.
4. "Δ" = MAY VARY UPON CUSTOMERS REQUEST
5. "●" = ADD 1/2 HP FOR ELECTRIC MACHINES.
6. DEDUCT 7" FROM LOAD SECTION FOR STEAM HEATED MACHINES.
INSTALLATION CONNECTIONS
LTR DESCRIPTION SIZE
A HOT WATER TO AUTO FILL – 140° F*** 1/2 FIPS
B HOT WATER TO ELECT. BSTR & AUTO FILL* 3/4 FIPS
C HOT WATER TO STEAM BSTR & AUTO FILL** 3/4 FIPS
D HOT WATER TO FINAL RINSE – 180° F 1/2 FIPS
E STEAM TO BOOSTER AND TANKS 2" FIPS
F CONDENSATE RETURN – BSTR & TANKS 3/4 FIPS
G DRAIN CONNECTION 2" FIPS
H ELECT. SERVICE – WASH HTRS. * 20 KW
J ELECT. SERVICE – RINSE HTRS.* 40 KW
K ELECT. SERVICE – WASHER MTRS. 8 HP●
L ELECT. SERVICE – BOOSTER * 27/45 KW
M ELECT. SERVICE – LIGHTS * 120 V


INSTALLATION AND LAYOUT DETAIL
CLIPPER RC 18 RPW-W
AUTOMATIC CONTINUOUS CONVEYOR TYPE DISHWASHING MACHINE
Insinger
Philadelphia, PA 19135
(215) 624-4500
FAX (215) 624-5905
DRWN ENN 5.6.03
REV ENN 10.11.07
FLC STD/LHD/RDR
SCALE 1/2" = 1'
DWG NO CLIPPER
REV K
94" DOORS IN RAISED POSITION
4" MIN.
26" CLEARANCE
33
17
ADDITIONAL CLEARANCE FOR DOOR REMOVAL
TRAYS & DISHES
RACKS
19 7/8
18 7/16
75" OVERALL HEIGHT
5 3/4
33
41" OVERALL WIDTH
18'-7" OVERALL LENGTH
UNLOAD SECTION
6'-0"
VENTS WITH ADJUSTABLE DAMPERS BOTH SIDES
WASH & RINSE SECTION
6'-0"
3'-0"
PREWASH SECTION
3'-7"
3'-0"
LOAD SECTION
CONVEYOR CTR'L BUTTON (EACH END)
LEFT TO RIGHT FEED
62
99
66
62
57
44
43
12 1/2
25 1/2
15 1/2
12
11
10
9
8
6
5
4
3
2
NOTES:
1. "*" - FOR ELECTRICALLY HEATED MACHINES ONLY
2. "**" - FOR HOT WATER TO BOOSTER 140° F STD / 110° F SPECIAL
3. "***" - USED ONLY WITH "E" CONNECTION
4. "△" - MAY VARY UPON CUSTOMERS REQUEST.
5. "●" - ADD 1/2 HP FOR ELECTRIC MACHINES.
6. DEDUCT 7" FROM LOAD SECTION FOR STEAM HEATED MACHINES
INSTALLATION CONNECTIONS
LTR DESCRIPTION SIZE
A HOT WATER TO AUTO FILL - 140° F*** 1/2 FIPS
B HOT WATER TO ELECT. BSTR & AUTO FILL* 3/4 FIPS
C HOT WATER TO STEAM BSTR & AUTO FILL** 3/4 FIPS
D HOT WATER TO FINAL RINSE - 180° F 1/2 FIPS
E STEAM TO BOOSTER AND TANKS 2" FIPS
F CONDENSATE RETURN - BSTR & TANKS 3/4 FIPS
G DRAIN CONNECTION 2" FIPS
H ELECT. SERVICE - WASH HTRS.* 20 KW
J ELECT. SERVICE - RINSE HTRS.* 40 KW
K ELECT. SERVICE - WASHER MTRS. 6 HP●
L ELECT. SERVICE - BOOSTER* 27.45 KW
M ELECT. SERVICE - LIGHTS* 120 V

Insinger

Item #_____

MASTER RC

AUTOMATIC THREE TANK RACKLESS CONVEYOR DISHWASHER

CSI - 11400

DESIGN

Automatic conveyor, flight type three tank dishwasher with recirculating prewash, wash and rinse and fresh water final rinse. Capacity is 13,000 dishes per hour with a conveyor speed of 10.4 ft. per minute. Designed for left or right hand conveyor travel, as specified.

STANDARD EQUIPMENT

- Exclusive CrossFire® Wash system (patented)
- Tank heat: 60 KW electric immersion heaters or steam injectors
- Capillary thermometers for prewash, wash, rinse and final rinse
- Final rinse pressure gauge
- Vacuum breakers on all incoming water lines
- Manifold cleanout brush
- Inspection and cleanout doors
- S/S frame, legs and feet
- Automatic tank fill
- Low water protection
- Detergent connection provision
- SureFire™ Start-Up and Check-Out Service
- Top mounted NEMA 12 control panel
- Steam booster
- Simplified scrap screen design
- Door safety switches
- Exhaust connections with adjustable dampers
- Standard frame drip proof motors
- Conveyor reversing switch
- Polypropylene belt with removable rack sections
- Conveyor safety stop bar
- Override switch for de-liming
- Interior work lights

OPTIONAL ACCESSORY EQUIPMENT

- ❑ Stainless steel steam coil tank heat
- ❑ Pressure reduction valve and line strainer
- ❑ Stainless steel belt with removable rack sections
- ❑ Single point electrical connection: motors, controls, and heaters
- ❑ Electric booster
- ❑ Security package
- ❑ S/S front enclosure panel
- ❑ S/S panels all sides
- ❑ Insulated hood and doors
- ❑ Totally enclosed motors
- ❑ 5 inch wide conveyor section for washing flatware

UL NSF

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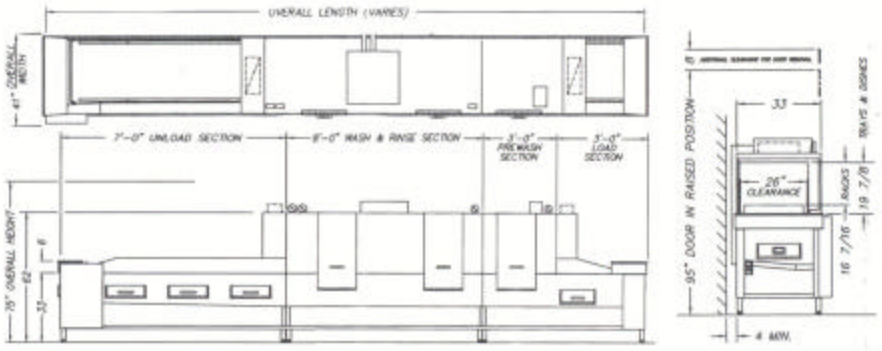
6245 State Road
Philadelphia, PA 19135-2996
215-624-4800
215-624-6966 FAX
800-344-4802
www.insingermachine.com

SUREFIRE START-UP & CHECK-OUT SERVICE

CSI - 11400

Insinger MASTER RC



Note: For all rough in connections see Installation and Layout Detail Drawing.

SPECIFICATIONS

CONSTRUCTION - Hood and tank constructed of 16 gauge 18-8 type 304 S/S. Hood unit of all welded seamless construction. S/S frame, legs and feet. All internal castings are non-corrosive nickel alloy, bronze or S/S investment.

DOORS - Three extra large die formed 18-8 type 304 S/S front inspection doors riding in all S/S channels. A triple ply leading edge on the door channels made of S/S with no plastic or nylon sleeves or liners used. Two intermediate S/S door-safety stops on each door.

CONVEYOR - Polypropylene or S/S rack sections on S/S belt with Hi-D rollers and removable rack sections. Conveyor drive system includes large speed reducer with cut gears operating in oil bath and frictionless, trouble-free overload release system. Dishware conveyed automatically through all washing and rinsing systems and is driven by an independent 1/2 HP motor. A stop bar sits at the end of the unload section. This will shut off the conveyor if any ware reaches the bar. A reversing switch is provided to assist in removing jams in the belt.

PUMPS - Centrifugal type "packless" pump with a brass petcock drain. Construction includes ceramic seal and a balanced cast impeller on a precision ground stainless steel shaft. All working parts mounted as aan assembly and removable as a unit without disturbing pump housing. Two 3HP motors, 1725RPM - wash and rinse; and 2 HP - prewash, standard horizontal C-face frame, drip proof, internally cooled with ball-bearing construction.

CONTROLS - Top-mounted control cabinet, NEMA 12 rated with heat insulation provided between hood and control cabinet, housing motor controls and overload protection, transformer, contactors and all dishwasher integral controls. All controls safe low voltage 24 VAC.

ENERGY SAVER - Electric photo eye automatically operates the final rinse solenoid only when ware passes, saving water and energy. The photo eye also activates an adjustable timer control. If no ware passes during the set time, the machine shuts down.

SPRAY SYSTEM - Spray arms are made of 18-8 type 304 stainless steel pipe. Spray assemblies removable without the use of tools.

PREWASH - Upper and lower manifolds. One manifold above with 3 power wash arms, each designed with 7, 6 &7 high pressure action cleansing slots and one manifold below with 3 power wash arms, each designed with 4 high pressure action cleansing slots. The slots are precision milled for water control, producing a fan spray. Wash arms are fillet welded to the S/S manifold.

WASH - Upper and lower manifolds & CrossFire® Wash system (patented). One manifold above with 3 power wash arms designed with 6, 5 & 6 high pressure action cleansing slots and one manifold below with 4 power wash arms, each designed with 6 high pressure action cleansing slots. The slots are precision milled for water control producing a fan spray. Wash arms are fillet welded to the S/S manifold. The CrossFire® system provides 4 horizontally spraying high pressure nozzles.

RINSE - Upper and lower manifolds. One manifold above with 3 power rinse arms, designed with 10, 9 & 10 high pressure action cleansing slots and one manifold below with 4 power rinse arms, each designed with 6 high pressure action cleansing slots. The slots are precision milled for water control, producing a fan spray. Rinse arms are fillet welded to the S/S manifold.

FINAL RINSE - Four nozzles above and four nozzles below threaded into S/S pipes. Nozzles produce a fan spray reducing water consumption, maximizing heat retention.

DRAIN - Drain valves externally controlled. Overflow assembly with skimmer cap is removable without use of tools for drain line inspection. Heaters protected by low water level control.

Capacity per hour	Tank capacity	Motor size	Electric usage	Steam consumption at 20 psi min.	Gas consumption
		2 hp (prewash)			
	24 gals. (prewash)	3 hp (wash)	60.0 kw tanks	218 lbs./hr tank	205,000 BTUH
13,000 dishes	36 gals. (wash)	3 hp (rinse)	36.0 kw booster 40° rise	111 lbs./hr rem. booster 40° rise	200 CFH nat. gas
1,000-2,000 meals	40 gals. (rinse)	1/2 hp (conveyor)	58.5 kw booster 70° rise	195 lbs./hr rem. booster 70° rise	82 CFH propane

Final rinse peak flow at 20 psi min.	Final rinse consumption at 20 psi min.	*Exhaust requirements	Peak rate drain flow
		750 CFM Load	
5.24 gals./min.	314 gals./hr.	750 CFM Unload	23 gals./min.

Shipping weight	Installation distance from vertical combustible service
3327 lbs.	2"

Current draw amps	Steam	Gas w/o booster	Electric w/o booster
208/3/60	32.1	39.3	204.7
240/3/60	29.1	35.6	178.0
380/3/50	17.6	21.6	111.4
480/3/60	14.5	17.8	88.7

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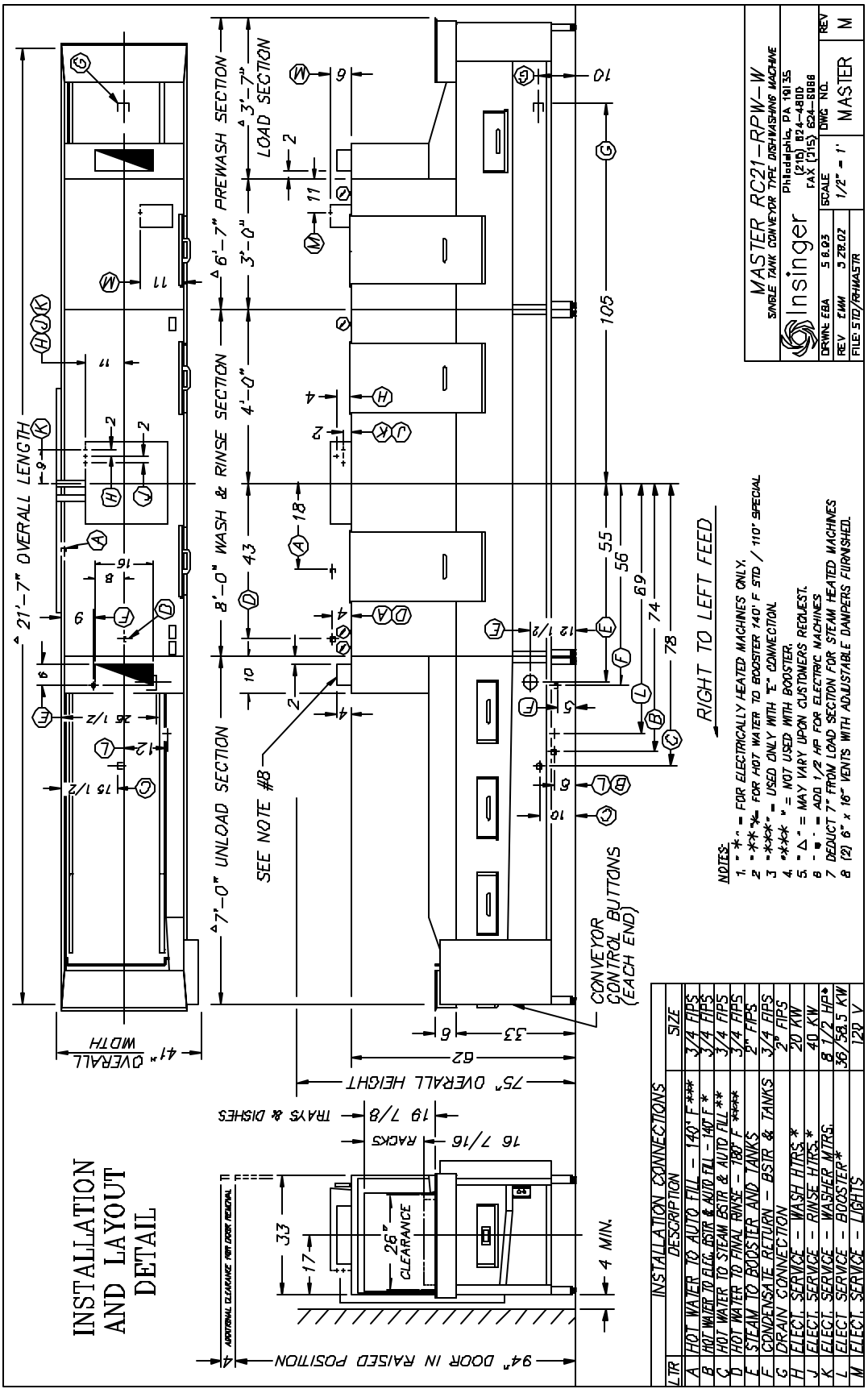
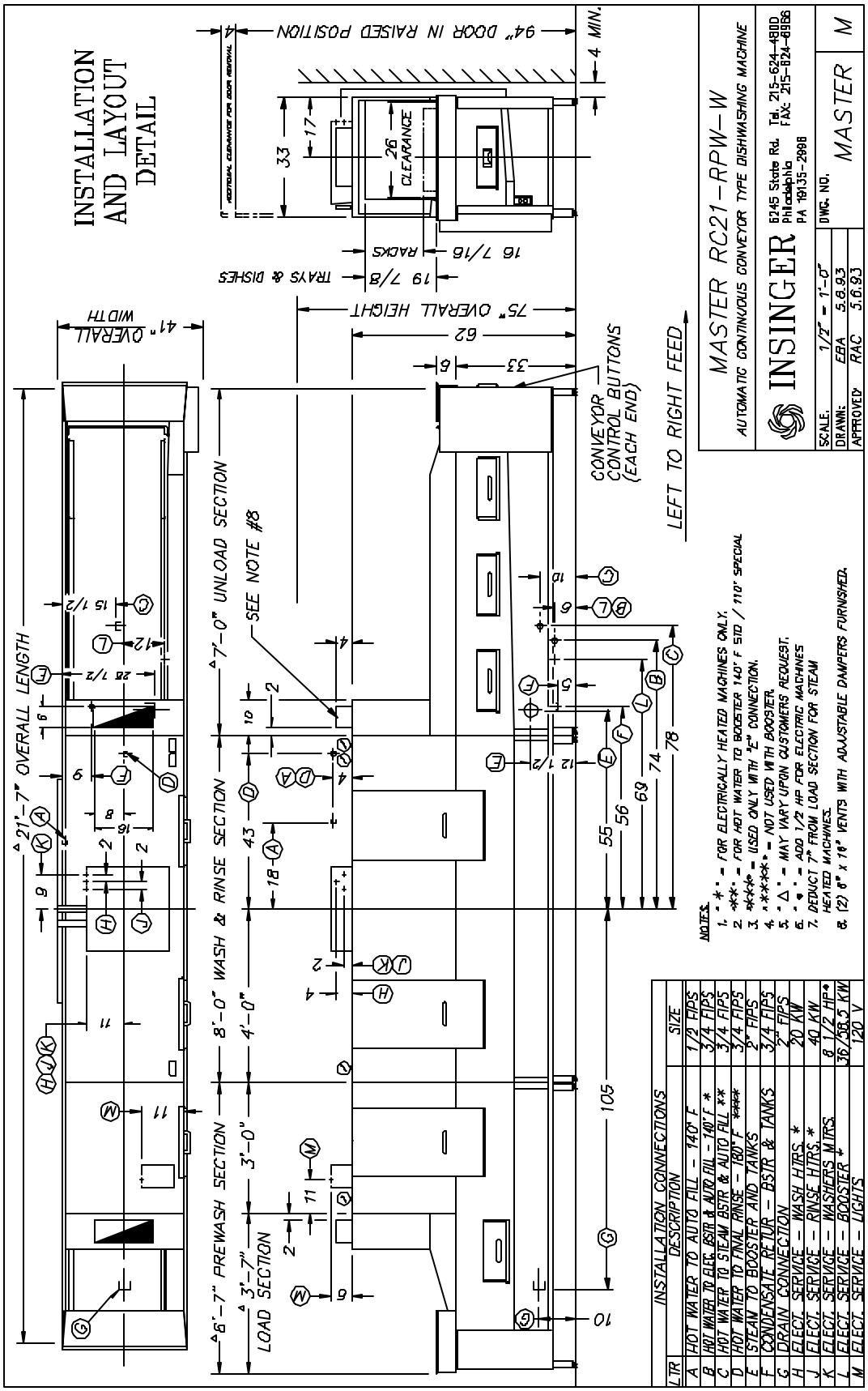
AutoQuotes


INSTALLATION AND LAYOUT DETAIL
MASTER RC21-RPW-W
SINGLE TANK CONVEYOR TYPE DISHWASHING MACHINE
Insinger
Philadelphia, PA 19135
(215) 824-4800
FAX (215) 624-8088
DRWN: EBA 5.6.03
REV: CWM 3.28.07
SCALE 1/2" = 1'
DWG NO. MASTER
REV M
FILE: STD/RHMASTR
RIGHT TO LEFT FEED
CONVEYOR CONTROL BUTTONS (EACH END)
SEE NOTE #8
21'-7" OVERALL LENGTH
7'-0" UNLOAD SECTION
8'-0" WASH & RINSE SECTION
6'-7" PREWASH SECTION
3'-7" LOAD SECTION
41" OVERALL WIDTH
75" OVERALL HEIGHT
94" DOOR IN RAISED POSITION
4 MIN.
26" CLEARANCE
33
17
RACKS
TRAYS & DISHES
19 7/8
16 7/16
INSTALLATION CONNECTIONS
LTR DESCRIPTION SIZE
A HOT WATER TO AUTO FILL - 140° F *** 3/4 FIPS
B HOT WATER TO ELEC. BSTR & AUTO FILL - 140° F * 3/4 FIPS
C HOT WATER TO STEAM BSTR & AUTO FILL ** 3/4 FIPS
D HOT WATER TO FINAL RINSE - 180° F **** 3/4 FIPS
E STEAM TO BOOSTER AND TANKS 2" FIPS
F CONDENSATE RETURN - BSTR & TANKS 3/4 FIPS
G DRAIN CONNECTION 2" FIPS
H ELECT. SERVICE - WASH HTRS. * 20 KW
J ELECT. SERVICE - RINSE HTRS. * 40 KW
K ELECT. SERVICE - WASHER MTRS. 8 1/2 HP*
L ELECT. SERVICE - BOOSTER* 36/38.5 KW
M ELECT. SERVICE - LIGHTS 120 V
NOTES:
1. " * " = FOR ELECTRICALLY HEATED MACHINES ONLY.
2. " ** " = FOR HOT WATER TO BOOSTER 140° F STD / 110° SPECIAL
3. " *** " = USED ONLY WITH "E" CONNECTION.
4. " **** " = NOT USED WITH BOOSTER.
5. " Δ " = MAY VARY UPON CUSTOMERS REQUEST.
6. " ■ " = ADD 1/2 HP FOR ELECTRIC MACHINES
7. DEDUCT 7" FROM LOAD SECTION FOR STEAM HEATED MACHINES
8. (2) 6" x 16" VENTS WITH ADJUSTABLE DAMPERS FURNISHED.


INSTALLATION AND LAYOUT DETAIL
MASTER RC21-RPW-W
AUTOMATIC CONTINUOUS CONVEYOR TYPE DISHWASHING MACHINE
INSINGER
6245 State Rd. Philadelphia PA 19135-2898
Tel. 215-624-4800 FAX: 215-624-6966
SCALE: 1/2" = 1'-0"
DRAWN: EBA 5.6.93
APPROVED: RAC 5.6.93
DWG. NO. MASTER M
LEFT TO RIGHT FEED
CONVEYOR CONTROL BUTTONS (EACH END)
94" DOOR IN RAISED POSITION
4 MIN.
26 CLEARANCE
33
17
16 7/8 RACKS
19 7/8 TRAYS & DISHES
75" OVERALL HEIGHT
62
41" OVERALL WIDTH
21'-7" OVERALL LENGTH
6'-7" PREWASH SECTION
3'-7" LOAD SECTION
3'-0"
8'-0" WASH & RINSE SECTION
4'-0"
7'-0" UNLOAD SECTION
SEE NOTE #8
105
78
74
69
56
55
43
18
NOTES:
1. '*' - FOR ELECTRICALLY HEATED MACHINES ONLY.
2. '**' - FOR HOT WATER TO BOOSTER 140° F STD / 110° SPECIAL
3. '***' - USED ONLY WITH "E" CONNECTION.
4. '****' - NOT USED WITH BOOSTER.
5. '△' - MAY VARY UPON CUSTOMERS REQUEST.
6. '●' - ADD 1/2 HP FOR ELECTRIC MACHINES
7. DEDUCT 7" FROM LOAD SECTION FOR STEAM HEATED MACHINES.
8. (2) 8" x 16" VENTS WITH ADJUSTABLE DAMPERS FURNISHED.
INSTALLATION CONNECTIONS
LTR DESCRIPTION SIZE
A HOT WATER TO AUTO FILL - 140° F 1/2 FIPS
B HOT WATER TO ELEC. BSTR & AUTO FIL - 140° F * 3/4 FIPS
C HOT WATER TO STEAM BSTR & AUTO FILL ** 3/4 FIPS
D HOT WATER TO FINAL RINSE - 180° F *** 3/4 FIPS
E STEAM TO BOOSTER AND TANKS 2" FIPS
F CONDENSATE RETUR - BSTR & TANKS 3/4 FIPS
G DRAIN CONNECTION 2" FIPS
H ELECT. SERVICE - WASH HTRS. * 20 KW
J ELECT. SERVICE - RINSE HTRS. * 40 KW
K ELECT. SERVICE - WASHERS MTRS. 8 1/2 HP*
L ELECT. SERVICE - BOOSTER * 36/56.5 KW
M ELECT. SERVICE - LIGHTS 120 V

MASTER/CLIPPER FLIGHT MACHINES

INTRODUCTION

Purpose

The purpose of this technical manual is to provide installation, operation, cleaning and maintenance directions.

A section is provided for replacement parts.

Scope

This manual contains all pertinent information to assist in the proper installation, operation, cleaning, maintenance, and parts ordering for Insinger Flight machines including the Clipper and Master.

The **installation instructions** are intended for qualified equipment installers. The **operation and cleaning instructions** are intended for the daily users of the equipment. The **maintenance and parts sections** are intended for qualified service and/or maintenance technicians. Replacement parts may be ordered directly from our factory or from your local Insinger Authorized Service Agency. You can speak to the **Insinger Technical Services Department, 800/344-4802**, or e-mail us at **service@insingermachine.com**. When calling for warranty information or replacement parts please provide the model and serial number of your Insinger Equipment. These important numbers should be noted in this manual on the spaces provided on the opening page.

Surefire™ Start-up & Check-out Program

Insinger is proud to offer our exclusive Surefire™ Start-up & Check-out Program to our commercial customers. This service is included in the purchase price of your new Insinger dishwasher. We will provide an authorized factory service technician for the initial start-up of your new Insinger dishwasher to ensure it is running at optimum levels from the very first pass. Please call the factory or your local Insinger Sales Representative to schedule this service.

NSF 3-2003 requirements for detergent and chemical sanitizer dispensers.

This machine must be operated with an automatic detergent dispenser and, if applicable, an automatic chemical sanitizer feeder, including a visual means to verify that detergents and sanitizers are delivered or a visual or audible alarm to signal if detergents and sanitizers are not available for delivery to the respective washing and sanitizing systems. Please see instructions for electrical and plumbing connections located in this manual and in the feeder equipment manual.

Definitions

Throughout this guide you will find the following terms: WARNING, CAUTION, & NOTE.

WARNING indicates potential physical danger.
CAUTION indicates potential equipment damage.
NOTE indicates helpful operating hints or tips.

You will visually be able to identify each as shown below:

WARNING:
Indicates potential physical danger.

NOTE:
Indicates helpful operating hints or tips.

CAUTION:
Indicates potential equipment damage.

INSINGER MACHINE COMPANY LIMITED WARRANTY

Insinger Machine Company, Inc. (Insinger) hereby warrants to the original retail purchaser of this Insinger Machine Company, Inc. product, that if it is assembled and operated in accordance with the printed instructions accompanying it, then for a period of either 15 months from the date of shipment from Insinger or 1 year (12 months) from the date of installation, that said Insinger product shall be free from defects in material and workmanship. Whichever one of the two aforestated limited warranty time periods is the longest shall be the applicable limited warranty coverage time period.

Insinger may require reasonable proof of your date of purchase; therefore, you should retain your copy of invoice or shipping document.

This limited warranty shall be limited to the repair or replacement of parts which prove defective under normal use and service and which on examination shall indicate, to Insinger's satisfaction, they are defective. Any part that is claimed to be defective and covered by this limited warranty must be returned to Insinger, this may be done through an Authorized Service Agency. Furnish serial number of machine with shipment and send to:

Insinger Machine Company
6245 State Road
Philadelphia, PA 19135-2996

If Insinger's inspection confirms the defect and the claim, Insinger will repair or replace such part without charge and return it to you freight or postage prepaid.

This limited warranty does not cover any failure or accident, abuse, misuse, alteration, misapplication, improper installation, fire, flood, acts of God or improper maintenance or service, or failure to perform normal and routine maintenance as set out in the instruction booklet (operating instructions) or for improper operation or failure to follow normal operating instructions (as set out in the instruction booklet). Insinger is not responsible nor liable for any conditions of erosion or corrosion caused by corrosive detergents, acids, lye or other chemicals used in the washing and or cleaning process.

Service must be done by either Insinger Appointed Service Agencies or agencies receiving prior authorization from Insinger.

All warranty work must be done during normal working hours, unless purchaser receives prior authorization from Insinger.

There are no other express warrants except as set forth herein and any applicable implied warranties of merchantability and fitness are limited in duration to the period of coverage of this express written limited warranty. This limited warranty supersedes all other express warranties, implied warranties of merchant-ability and fitness or limited warranties as of this date, January 1, 1998. Some states do not allow limitation on how long an implied warranty lasts so this limitation may not apply to you.

Insinger is not liable for any special, indirect or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so this limitation nor exclusion may not apply to you.

Insinger does not authorize any person or company to assume for it any other obligation or liability in connection with the sale, installation, use, removal, return or replacement of its equipment: and no such representations are binding on Insinger.

INSINGER MACHINE COMPANY LIMITED WARRANTY
COMMERCIAL MARINE USE

Insinger Machine Company, Inc. (Insinger) hereby warrants to the original retail purchaser of this Insinger Machine Company, Inc. product, that if it is assembled and operated in accordance with the printed instructions accompanying it (installation manual), then for a period of 18 months from the date of installation on board the vessel, that said Insinger product shall be free from defects in material and workmanship.

Insinger may require reasonable proof of your date of equipment install, therefore, you should retain your copy of invoice or shipping document.

This limited warranty shall be limited to the replacement of parts which prove defective under normal use and service and which on examination shall indicate, to Insinger's satisfaction, they are defective. Any part that is claimed to be defective and covered by this limited warranty must be returned to Insinger. Furnish serial number of machine with shipment and send to:

Insinger Machine Company, Inc.
6245 State Road
Philadelphia, PA 19135-2996

If Insinger's inspection confirms the defect and the claim, Insinger will repair or replace such part without charge and return it to you freight or postage prepaid. If part damages are not covered, Insinger will contact Customer and advise.

If a factory trained authorized technician is required to repair or replace defective parts or material during the 18 month warranty period, the cruise line will be responsible for the payment of travel expense and a minimum of four hours labor. Labor will be billed to the customer at a reduced rate of $40.00 per hour. If sailing with a vessel is required, then an eight hour per day minimum will apply.

This limited warranty does not cover accident, abuse, misuse, alteration, misapplication, improper installation, fire, flood, or improper maintenance or service, or failure to perform normal and routine maintenance as set out in the instruction booklet (operating instructions) or for improper operation or failure to follow normal operating instructions (as set out in the instruction booklet).

Insinger is not responsible nor liable for any conditions of erosion or corrosion caused by corrosive detergents, acids, lye or other chemicals used in the washing, caring and or cleaning process.

Warranty service must be done by either Insinger Appointed Service Agencies or agencies, customers galley engineers receiving prior authorization from Insinger.

There are no other express warrants except as set forth herein and any applicable implied warranties of merchantability and fitness are limited in duration to the period of coverage of this express written limited warranty. This limited warranty supersedes all other express warranties, implied warranties of merchantability and fitness or limited warranties as the above date.

Insinger does not authorize any person or company locally or overseas to assume for it any other obligation or liability in connection with the sale, installation, use, removal, return or replacement of its equipment; and no such representations are binding on Insinger.

INSTALLATION INSTRUCTIONS

Placement

Carefully uncrate machine.

Bolt the three sections together.

> **NOTE:**
> Use a silicone caulking between the sections in addition to the gasketing material provided. This will minimize the possibility of leaks.

Electrical Connections

Connect electrical lines sized for the correct voltage, current and phase of the machine. These should agree with machine requirements indicated on the nameplate and labels in control panel.

On machines not provided with a single-point connection there is an electrical connection required for the, **1.** Pumps and control circuit, **2.** Wash tank heaters (electric heat only) and, **3.** Rinse tank heaters (electric only).

Machines provided with a single-point connection require one electrical connection in the control panel for all functions excluding the booster.

> **NOTE:**
> In each case connections must be made to a circuit breaker or fused disconnect as provided by the end-user and required by local codes. A wiring diagram is supplied inside the control panel. Please return diagram when finished.

> **NOTE:**
> As with any 3 phase system, an electrician should check all motors for proper phasing, i.e., Pump motors must be running in direction indicated by arrow on housing.

Electrical termination points are also required between each of the sections in the termination box located on the frame in the rear of the machine near where the sections meet.

Mechanical Requirements

Connect 140ºF and 180ºF water supply to the tank and final rinse feeds respectively as tagged on the machines and noted on the installation drawing.

If machine is provided with steam heat connect the steam lines and steam condensate lines as tagged and noted on installation drawings.

Connect the drain lines.

> **NOTE:**
> Drain lines must be as specified on installation drawings. Drain line should be properly vented and should have fall of not less than ¼" to the foot of proper flow. Some area plumbing codes require drains to flow into an open gap with an opening twice the diameter of the pipe. Check with your local plumbing codes for the type of drain connection required.

> **NOTE:**
> All lines should be flushed prior to use to remove debris.

> **NOTE:**
> Do not reduce the size of lines as specified in installation drawings. All lines are sized to facilitate necessary flows, pressures, etc.

Adjust the compression spring located on the conveyor overload shutoff mechanism. This can be found on the unload end of the machine under the mechanism guard. There is sticker marked with the factory test setting of the spring. Adjust to this point then run the conveyor full of ware. If the machine does not shut down the adjustment is set. If it does shut down adjust the spring tighter until the machine runs continuously.

HVAC

Ventilation system should be sized to provide adequate ventilation per machine specs. Refer to spec sheet.

Stainless steel, watertight ducting should be connected to the vent cowls on each end of the machine or an overhead venting system should be installed.

Chemicals

Upon completed installation of the dishwasher contact a local detergent/chemical supplier for the correct chemicals for your area.

Electrical connection points for the detergent dispenser and rinse injector are located inside the control panel. Refer to the wiring diagram for this machine for the proper connection points. The detergent density probe should be located in a convenient place in the wash tank.

Insinger dishwashers are user-friendly, making them the easiest dishwashers on the market to operate and maintain.

By following the operation procedure and general cleaning procedures your Insinger dishwasher will give you years of trouble free service.

OPERATION INSTRUCTIONS

1. Ensure drain overflow tube is in place. Close all tank drain valves. One drain is provided for each tank of the dish machine.
2. Check for proper installation and cleanliness of all internal, removable components such as suction strainers, scrap screens, and spray manifolds.
3. Ensure all water, and steam lines are open. Ensure electrical circuits are on.
4. Close machine doors.

> **NOTE:**
> An interlock is provided to shut the machine down if the doors are open, therefore the machine will not run if doors are opened. Machines provided with the Prison Package do not have this feature.

5. Move the 2 position selector switch to the “ON” position.
6. The machine will automatically begin to fill.
7. When the tanks are full the tank heat will operate automatically.

> **NOTE:**
> To ensure proper operation of the auto tank fill feature and the tank heaters the two (2) level probes located in each tank MUST be cleaned daily.

8. Depress the Green button on the control panel to operate the pumps.
9. Located at the load and unload end of the machine is a start/stop station for operating the conveyor system. Depress the green button to start the conveyor.

> **NOTE:**
> An emergency stop bar is located at the end of the conveyor belt to shut the belt down. This will minimize ware breakage if the machine is not unloaded in time.

10. For machines provided with the Conveyor Overload Shutoff Mechanism a light labeled “Check Conveyor Belt” is provided on the control panel. When this light illuminates the machine will automatically shut down. Check the conveyor belt for jamming or ware caught in the belt.

> **NOTE:**
> Should the light illuminate and the machine shut-down after an initial check for jams, DO NOT continue running the machine. Immediately contact a maintenance person or qualified service technician. Refer to the Conveyor Overload Shutoff Mechanism Adjustment section in the Maintenance Section of the manual.

11. The system is now ready for operation. All ware should be properly scrapped.
12. Place dirty ware on the conveyor belt. The ware will pass through the various machine cycles. The final rinse is automatically started when ware passes the photo-eye located at the entrance of the machine.

> **NOTE:**
> The photo-eye located at the entrance of the machine should be cleaned daily of lime build-up for proper operation of the energy saver feature and the final rinse.

> **NOTE:**
> Move the Power toggle switch to the “OFF” position before draining the machine.

13. Refer to the cleaning procedures for proper clean-up of the dish machine.
14. Report any unusual occurrences to qualified service personnel.

CLEANING PROCEDURES

The following cleaning procedures should be done daily, at the end of the shift.

Daily

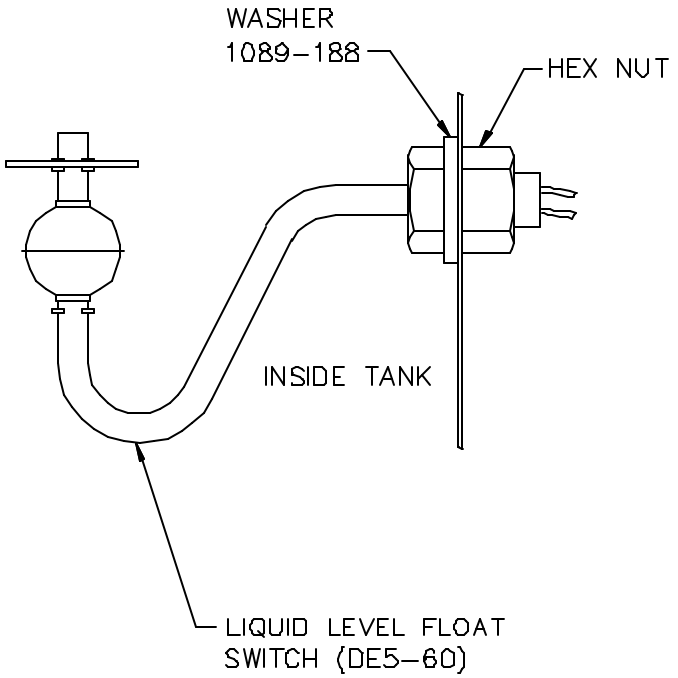
1. Remove all internal removable parts including spray manifolds, scrap screens, drain overflow tubes, suction strainers and curtains.
2. Remove the end caps from the spray manifolds and clean with the brush provided. Flush the manifolds.
3. Flush scrap screens.
4. Clean drain overflow tube.

> **NOTE:**
> V-cup seal on the drain overflow tube may become gummed not allowing a proper seal of the overflow tube. This will cause the drain to leak water. Remove any build-up on the V-cup seal. When the seal becomes worn, replace.

5. Clean suction strainers of build-up.

> **NOTE:**
> Improper cleaning of suction strainer will cause the pumps to cavitate. This will cause poor washing results.

6. Clean tank level floats (2 per tank) with Scotch-Brite or equivalent.



> **WARNING:**
> Level floats must be cleaned daily. Build-up of grease and scum will cause faulty operation of tank fill and heating system.

7. Clean curtains. When curtains are beyond cleaning or torn they should be replaced.
8. Final rinse nozzles should be cleaned of matter clogging the jet spray.
9. Clean the photo-eye lenses with a damp, soft cloth.
10. Doors should be left open to allow drying of interior surfaces.

The following is a basic guide for the repair and replacement of common dishwasher parts. Refer to the Basic Service Guide for troubleshooting tips.

MAINTENANCE REQUIREMENTS

Daily

1. Refer to the operation and cleaning instructions provided in this manual for daily cleaning procedures.

Weekly

1. The entire machine should be wiped down using an industrial grade stainless steel cleaner.
2. Under the supervision of your detergent supplier the machine interior must be properly de-limed.

> **NOTE:**
> The water quality in some areas requires de-liming to be done more frequently. Contact your detergent supplier for recommended de-liming frequency.

Quarterly

1. Remove and clean the strainer screens on water and steam lines. If the screens cannot be cleaned, replace.
2. Inspect condition of solenoid valve seats and diaphragms. Replace where necessary.
3. Inspect drain O-Rings for leakage. Replace where necessary.
4. Adjust conveyor chain tension using adjustment bolts located on exit end of machine.

MAINTENANCE PROCEDURES

Solenoid Valve Disassembly

1. Disconnect power supply to machine. Turn off water supply.
2. Remove cap on top of coil. Remove coil.
3. Remove 4 hex bolts and lift bonnet from valve body. Note positioning of spring and plunger.
4. Remove main piston.
5. Inspect for dirt, wear or lime build-up. Clean or replace as required.
6. Reassemble in reverse of disassembly.

Line Strainer Disassembly

1. Shut off water or steam supply.
2. Remove large hex nut on bottom of strainer body.
3. Remove strainer screen. Inspect and clean or replace as necessary.
4. Reassemble in reverse of disassembly. Water flow must be same direction as arrow on line strainer body. Use new gaskets to insure a tight seal.

Pump Disassembly

1. Before disassembling pump ensure there are no obstructions in the pump intake. Remove and clean the suction strainer (inside tank). See dwg. SK-4702 and SK-4702
2. IT IS NOT NECESSARY TO REMOVE THE PUMP HOUSING FROM THE MACHINE TO DISASSEMBLE THE PUMP.
3. Remove the pump motor and impeller adaptor by removing the 4 hex bolts attaching them to the pump housing.
4. Repair or replace the pump parts as required. Reassemble in reverse of disassembly.

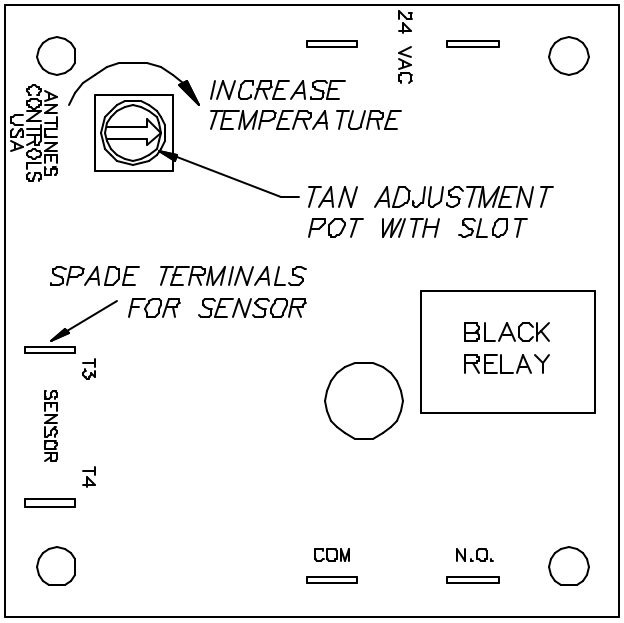
Immersion Heater Replacement

1. The immersion heater MUST be completely submerged at all times. If this is not the case contact a qualified service technician. The heated surface should never be in contact with sludge. See dwg. SK-4703
2. Remove the housing covering the wiring terminations. Disconnect the immersion heater wires.
3. Remove the immersion heater by loosening and removing the large hex nut.
4. Install in reverse of removal.

> **NOTE:**
> Use plumbers putty as gasketing around the immersion heater to insure no leaks.

Tank Heat Temperature Adjustment

1. A temperature control board is provided in the control panel for easy adjustment of tank temperature. Though tank temperature is adjusted during the machines factory test it is sometimes necessary to re-adjust the temperature at start-up.
2. Locate the temperature control board (P/N DE9-251). Use the control panel layout drawing located in Part 5, Electrical Schematic and Replacement Parts.
3. Adjust the tank temperature to the desired temperature by turning the potentiometer located on the temperature control board. An arrow on the potentiometer indicates increase.



TANK TEMPERATURE CONTROL BOARD
(DE9-251)

Troubleshooting Tank Temperatures

Electric Heat

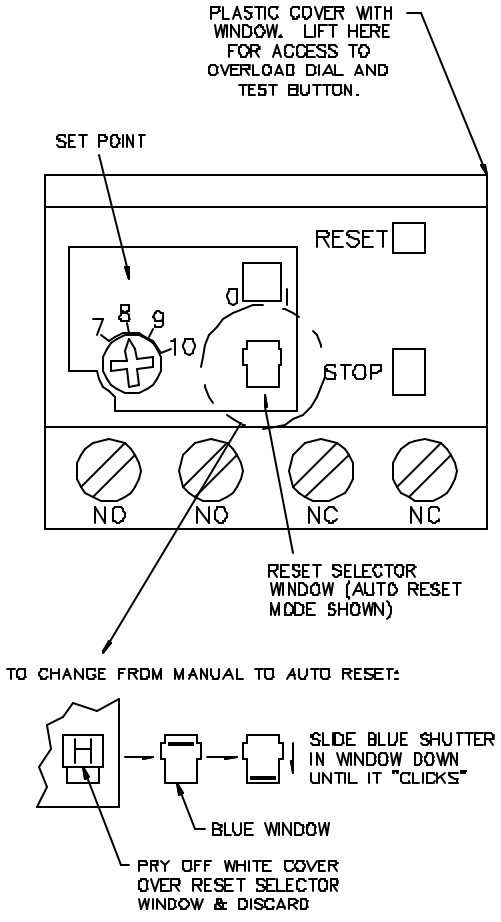
1. If temperature cannot be adjusted, check the temperature control board P/N DE9-251 proper operation. If the temperature control board is faulty, replace.
2. Verify tank heat contactor is working correctly. If not, replace. Verify all immersion heaters are working properly and not limed. If not, replace.

Steam Heat

1. If temperature cannot be adjusted, check the temperature control board P/N DE9-251 proper operation. If the temperature control board is faulty, replace.
2. Verify steam pressure per machine specifications.
3. Verify steam trap is not clogged. If so, replace.

Motor Overloads

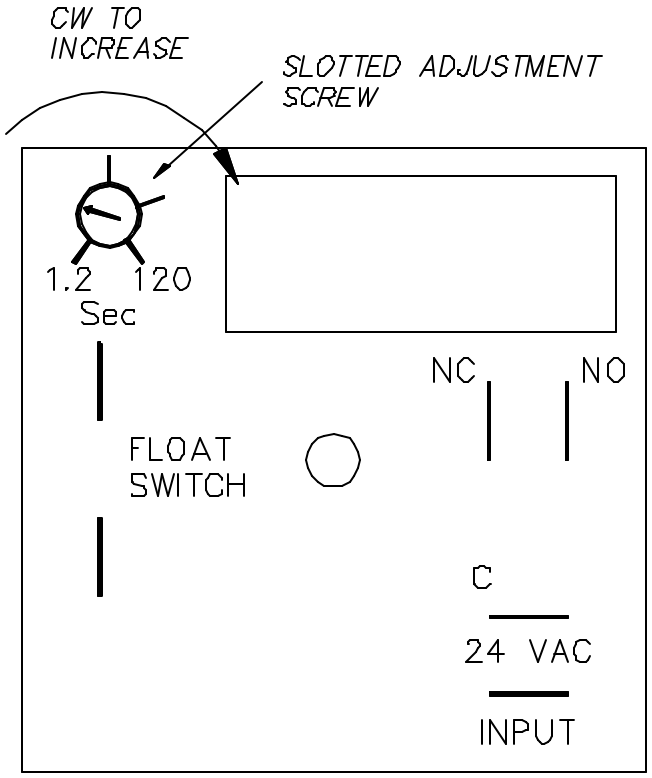
1. All motors used on Insinger Machines are provided with motor overloads. Motor overloads are adjusted when the machines are factory tested. Should it be necessary to adjust the motor overloads in the field first verify the motor current draw for the voltage the machine is using.
2. Using the Control Panel Component Layout Dwg. located in Part 5 to identify the overload adjust by turning the dial to the appropriate AMP draw.


PLASTIC COVER WITH WINDOW. LIFT HERE FOR ACCESS TO OVERLOAD DIAL AND TEST BUTTON.
SET POINT
RESET
STOP
NO
NO
NC
NC
RESET SELECTOR WINDOW (AUTO RESET MODE SHOWN)
TO CHANGE FROM MANUAL TO AUTO RESET:
H
SLIDE BLUE SHUTTER IN WINDOW DOWN UNTIL IT "CLICKS"
BLUE WINDOW
PRY OFF WHITE COVER OVER RESET SELECTOR WINDOW & DISCARD

OVERLOAD RELAY
SK-3829

Level System

1. The level control system consists of a level board (P/N DE7-35) for both the wash and rinse tank and a level float (P/N DE5-60) per tank.
2. The level float will not allow the tank heat to energize without water in the tank.



LIQUID LEVEL TIMER DE7-35

SKETCHA\SK-4698

CAUTION:

Should the tank heat energize without water in the tank, troubleshoot the system to find the problem. Check the floats.

WARNING:

Dirty level floats will cause the tank heat to energize with no water in the tanks.
LEVEL FLOATS MUST BE CLEANED DAILY.

Final Rinse Actuator

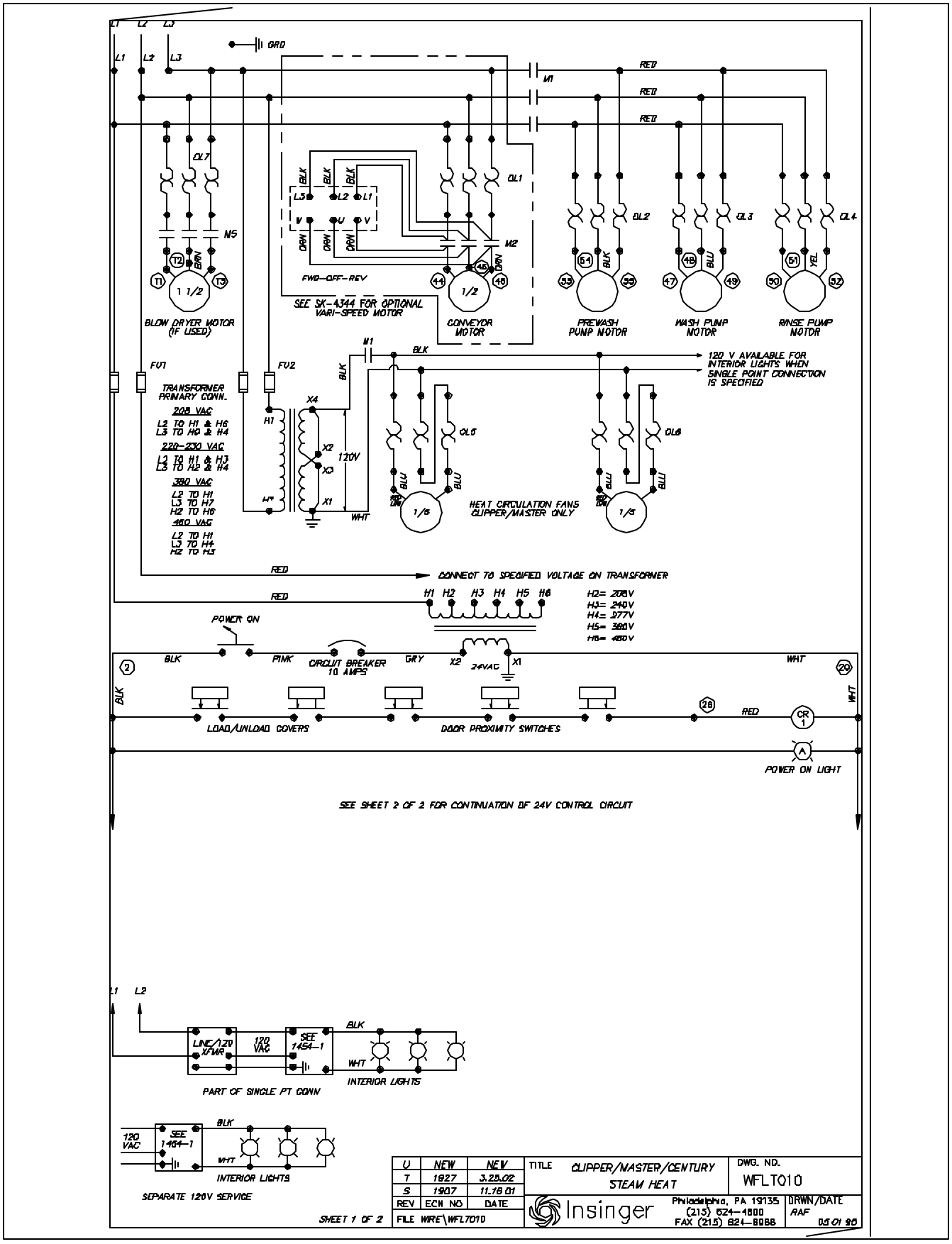
1. The final rinse is actuated by the photo-eye emitter and receiver located at the entrance to the machine. See dwg. 1100-265.
2. When the beam is broken by a plate, etc., the final rinse time is energized turning on the final rinse solenoid and allowing the water to flow. After one minute the timer will de-energize turning the solenoid off. The energy saver timer (P/N DE7-28) is reset to 0 at the same time the final rinse timer is energized. The energy saver timer is adjustable between 0-300 SEC.

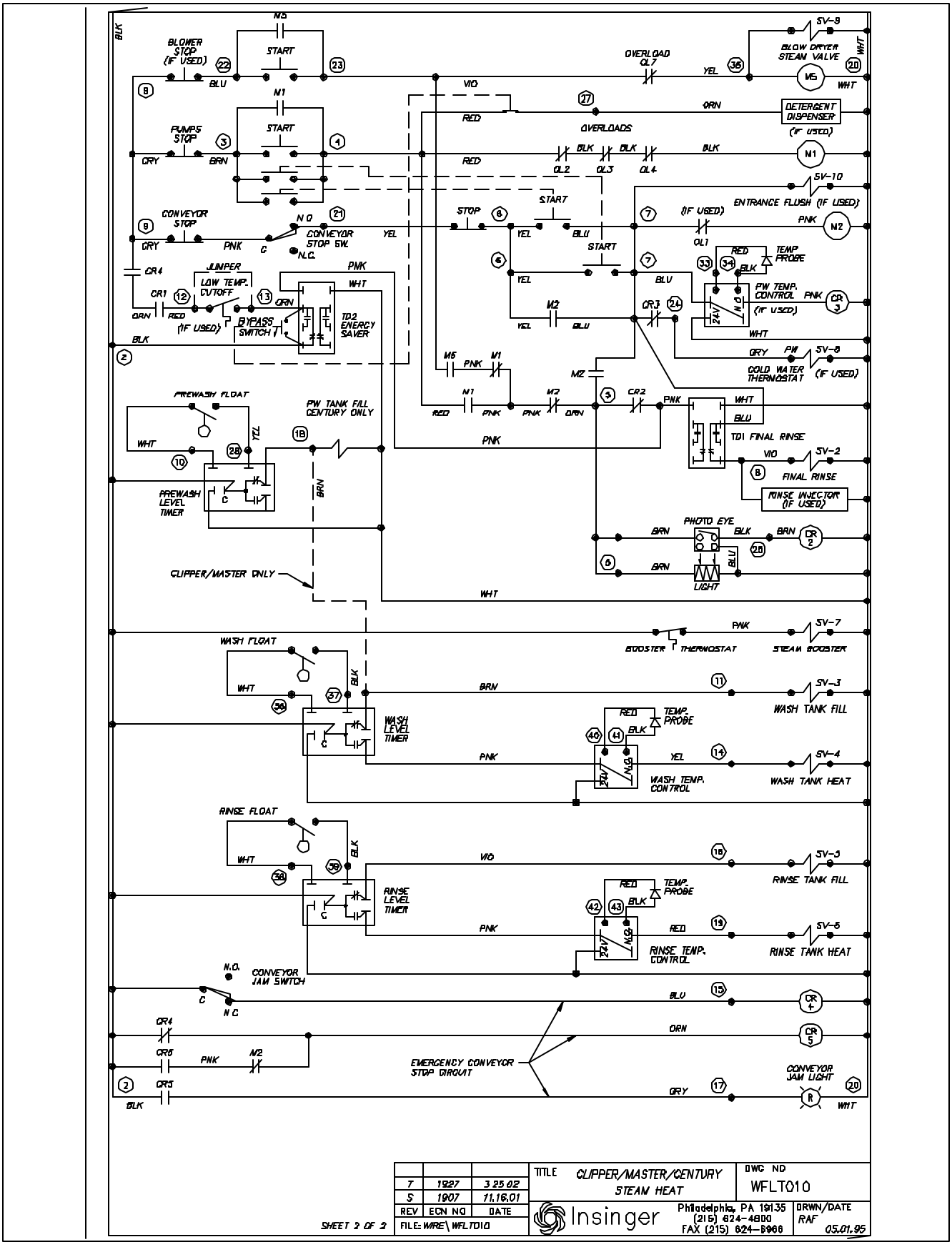
Conveyor Belt Adjustment

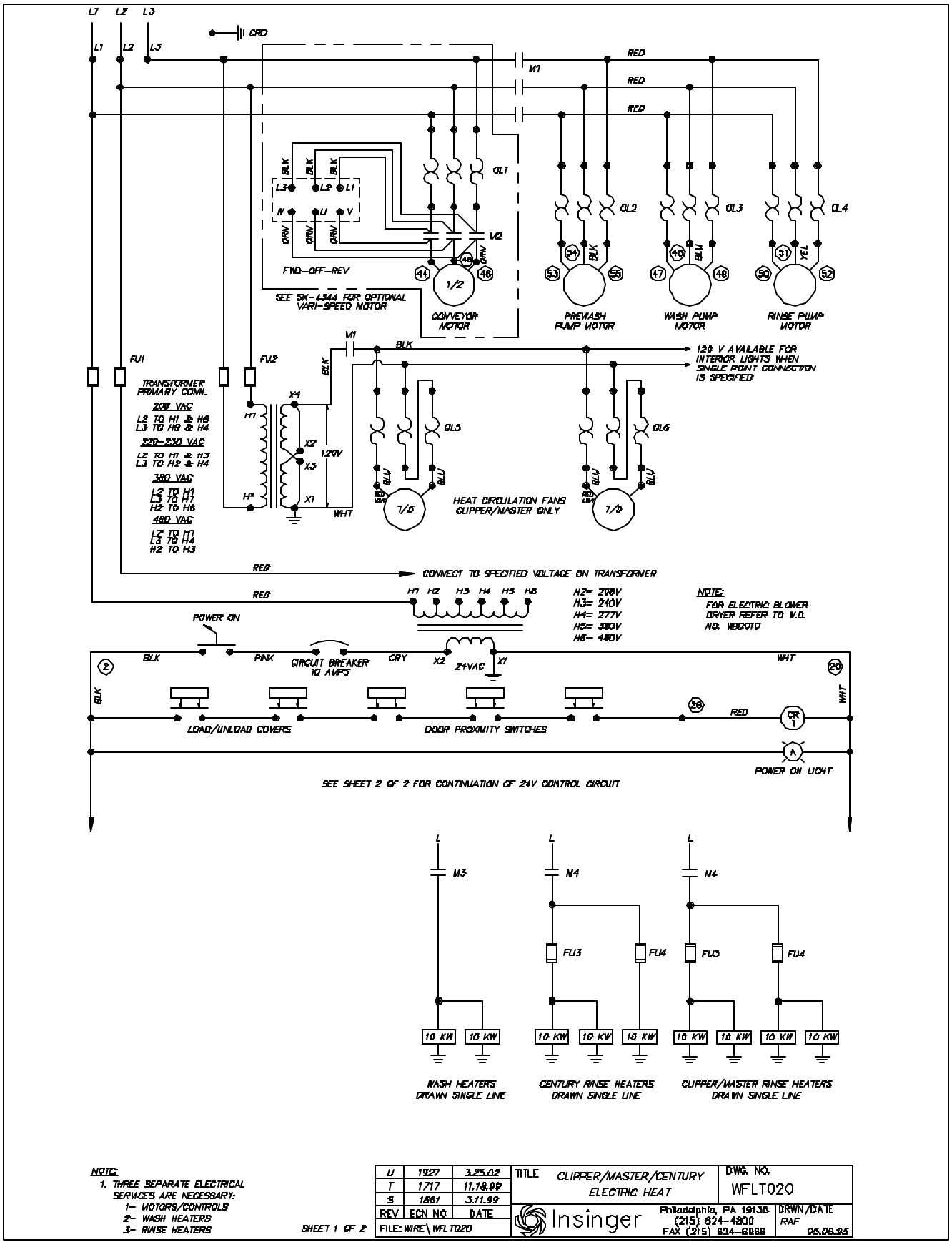
1. The conveyor belt tension is adjustable by locating two adjustment bolts on the load side of the machine. The bolts can be moved in and out of the conveyor follower shaft therefore adjusting the belt tension.

Conveyor Overload Shut-off Mechanism Adjustment (P/N 1100-289)

1. A clutchless overload is used to shut the machine completely down should a jam occur in the conveyor system. The jam may be caused by ware being caught, bent tracks or misalignment of the conveyor belt.


L1 L2 L3
GRD
M1
RED
OL7
OL1
OL2
OL3
OL4
M5
M2
BLK
GRN
FWD-OFF-REV
SEE SK-4344 FOR OPTIONAL VARI-SPEED MOTOR
BLOW DRYER MOTOR (IF USED)
CONVEYOR MOTOR
PREWASH PUMP MOTOR
WASH PUMP MOTOR
RINSE PUMP MOTOR
FU1
FU2
TRANSFORMER PRIMARY CONN.
208 VAC
L2 TO H1 & H6
L3 TO H3 & H4
220-230 VAC
L2 TO H1 & H3
L3 TO H2 & H4
380 VAC
L2 TO H1
L3 TO H7
H2 TO H6
460 VAC
L2 TO H1
L3 TO H4
H2 TO H5
120V
WHT
120 V AVAILABLE FOR INTERIOR LIGHTS WHEN SINGLE POINT CONNECTION IS SPECIFIED
OL5
OL6
HEAT CIRCULATION FANS CLIPPER/MASTER ONLY
CONNECT TO SPECIFIED VOLTAGE ON TRANSFORMER
H1 H2 H3 H4 H5 H6
H2= 208V
H3= 240V
H4= 277V
H5= 380V
H6= 480V
POWER ON
CIRCUIT BREAKER 10 AMPS
24VAC
LOAD/UNLOAD COVERS
DOOR PROXIMITY SWITCHES
POWER ON LIGHT
SEE SHEET 2 OF 2 FOR CONTINUATION OF 24V CONTROL CIRCUIT
LINE/120 XFMR
SEE 1454-1
PART OF SINGLE PT CONN
INTERIOR LIGHTS
SEE 1464-1
SEPARATE 120V SERVICE
SHEET 1 OF 2
TITLE CLIPPER/MASTER/CENTURY STEAM HEAT
DWG. NO. WFLT010
Insinger Philadelphia, PA 19135 (215) 624-4000 FAX (215) 624-8088
DRWN/DATE RAF 05 01 95
U NEW NEW
T 1927 3.25.02
S 1907 11.18 01
REV ECN NO DATE
FILE WIRE\WFL7010


M5
START
BLOWER STOP (IF USED)
M1
START
PUMPS STOP
CONVEYOR STOP
N.O.
CONVEYOR STOP SW.
N.C.
JUMPER
LOW TEMP. CUTOFF (IF USED)
BYPASS SWITCH
TD2 ENERGY SAVER
PREWASH FLOAT
PW TANK FILL CENTURY ONLY
PREWASH LEVEL TIMER
CLIPPER/MASTER ONLY
WASH FLOAT
WASH LEVEL TIMER
RINSE FLOAT
RINSE LEVEL TIMER
CONVEYOR JAM SWITCH
EMERGENCY CONVEYOR STOP CIRCUIT
OVERLOAD OL7
OVERLOADS OL2 OL3 OL4
SV-9
BLOW DRYER STEAM VALVE
DETERGENT DISPENSER (IF USED)
SV-10
ENTRANCE FLUSH (IF USED)
TEMP PROBE
PW TEMP. CONTROL (IF USED)
COLD WATER THERMOSTAT (IF USED)
TD1 FINAL RINSE
SV-2
FINAL RINSE
RINSE INJECTOR (IF USED)
PHOTO EYE
LIGHT
BOOSTER THERMOSTAT
SV-7
STEAM BOOSTER
SV-3
WASH TANK FILL
WASH TEMP. CONTROL
SV-4
WASH TANK HEAT
SV-1
RINSE TANK FILL
RINSE TEMP. CONTROL
SV-6
RINSE TANK HEAT
CONVEYOR JAM LIGHT
TITLE CLIPPER/MASTER/CENTURY STEAM HEAT
DWG NO WFLT010
Insinger Philadelphia, PA 19135 (215) 624-4800 FAX (215) 624-8966
DRWN/DATE RAF 05.01.95
7 1927 3 25 02
5 1907 11.16.01
REV ECN NO DATE
FILE: WIRE\WFLT010
SHEET 2 OF 2



NOTE:
1. THREE SEPARATE ELECTRICAL SERVICES ARE NECESSARY:
   1– MOTORS/CONTROLS
   2– WASH HEATERS
   3– RINSE HEATERS

SHEET 1 OF 2

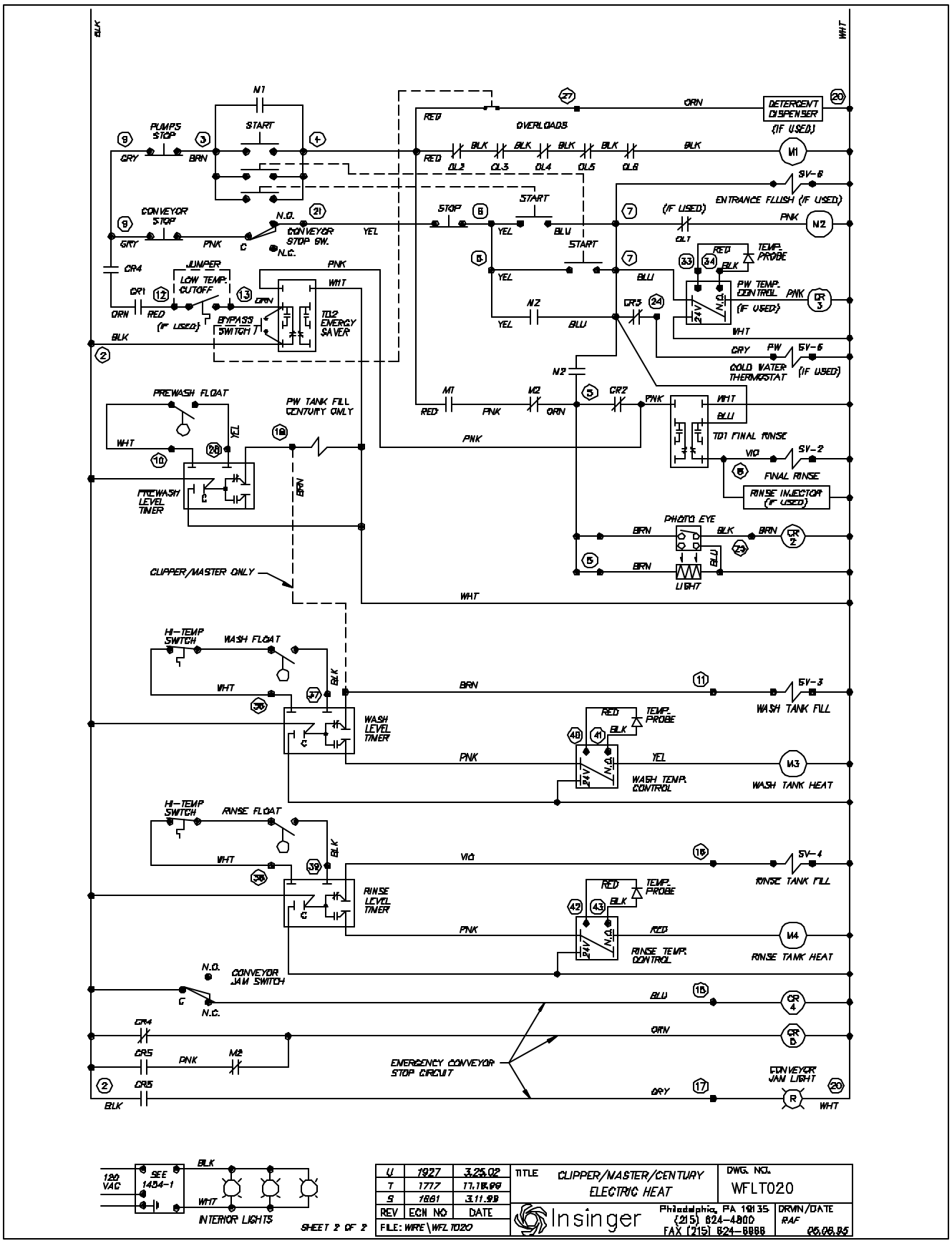
U	1927	3.25.02
T	1717	11.18.98
S	1661	3.11.99
REV	ECN NO	DATE
FILE: WIRE\WFLT020		

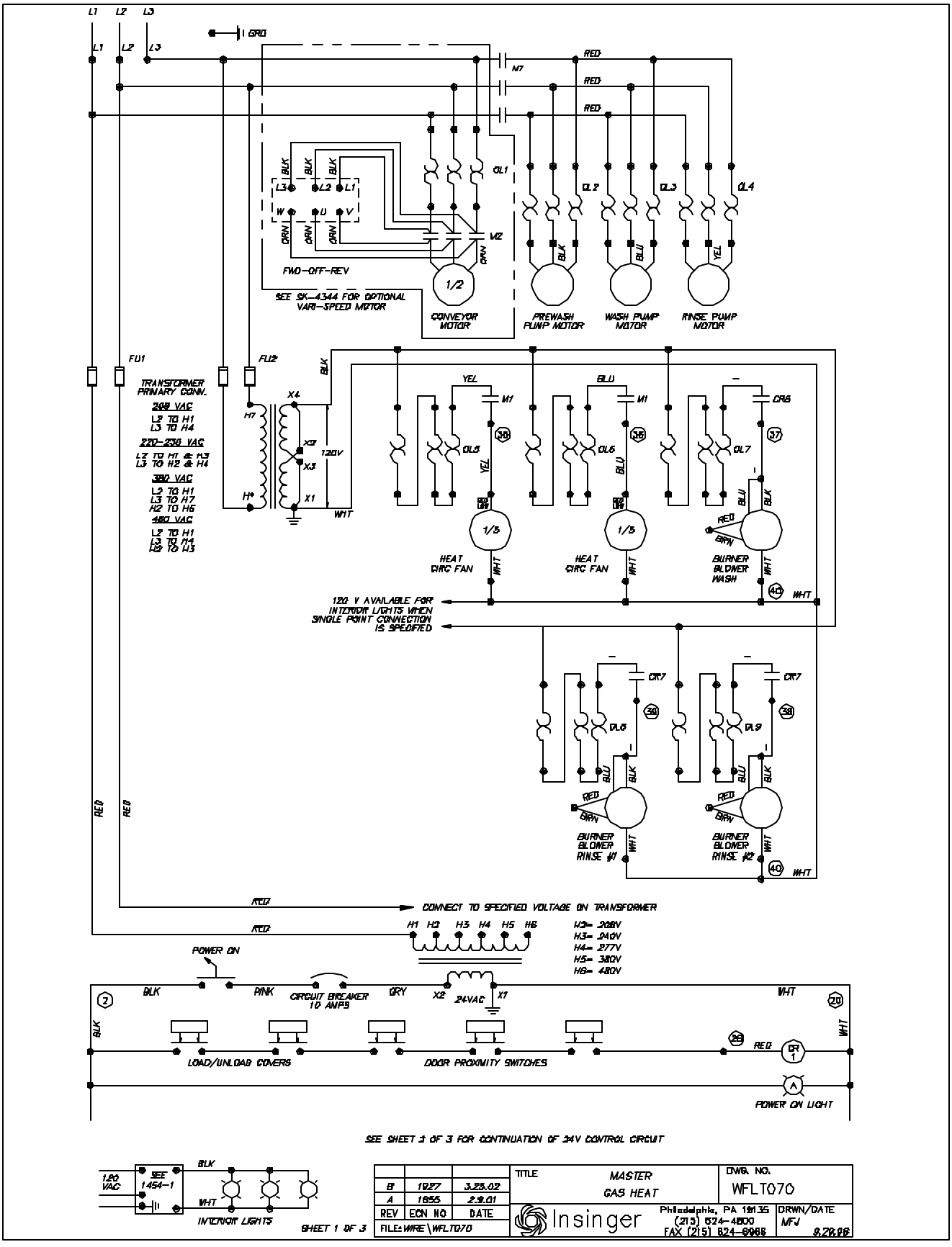
TITLE: CLIPPER/MASTER/CENTURY ELECTRIC HEAT

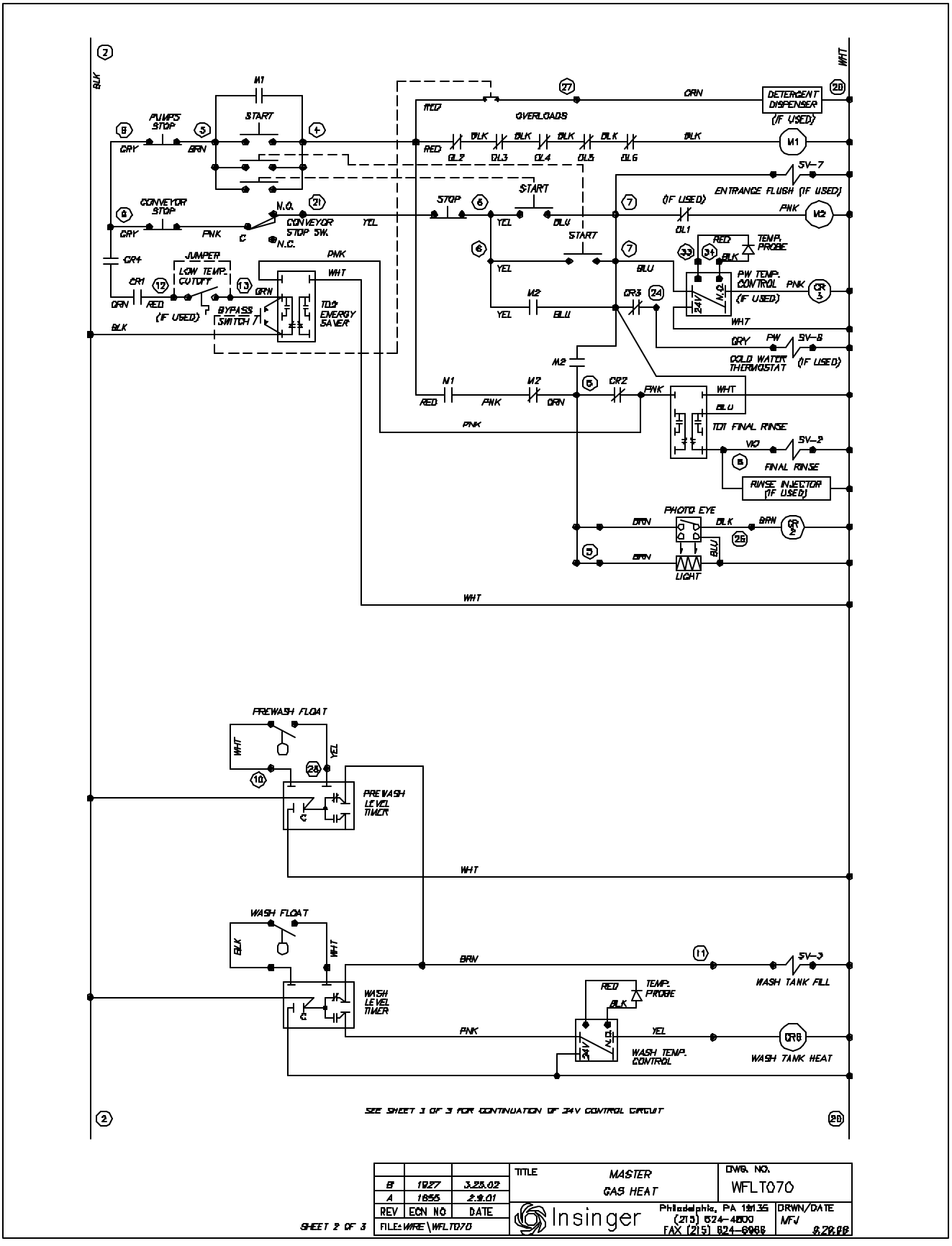
DWG. NO. WFLT020

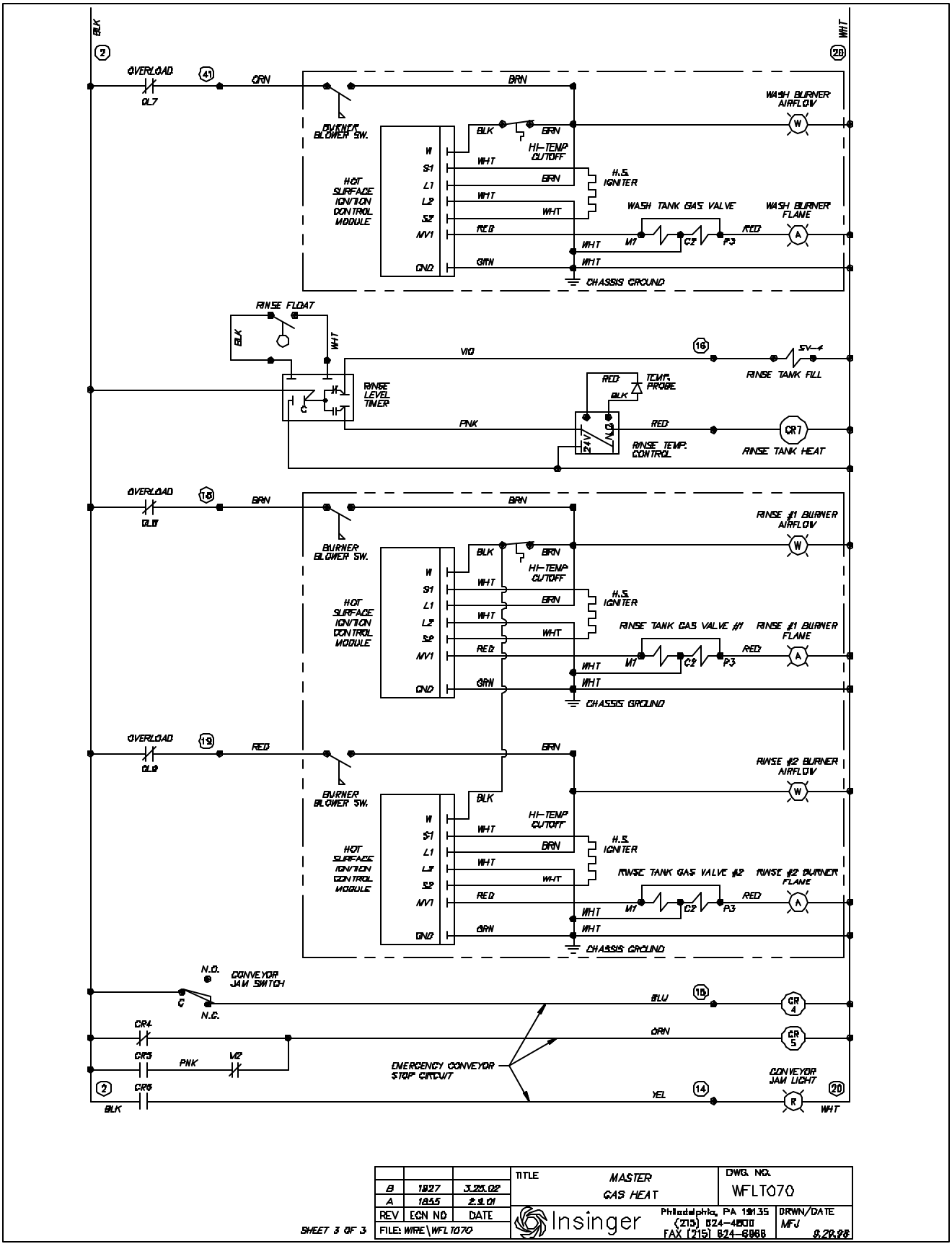
Insinger
Philadelphia, PA 19136
(215) 624–4800
FAX (215) 624–6888

DRWN/DATE RAF 06.08.95


BLK
WHT
M1
START
PUMPS STOP
GRY
BRN
RED
OVERLOADS
OL2
OL3
OL4
OL5
OL6
ORN
DETERGENT DISPENSER
(IF USED)
M1
SV-6
ENTRANCE FLUSH (IF USED)
PNK
M2
CONVEYOR STOP
N.O.
CONVEYOR STOP SW.
N.C.
YEL
STOP
START
BLU
(IF USED)
OL7
TEMP. PROBE
JUMPER
LOW TEMP. CUTOFF
CR4
CR1
ORN
RED
(IF USED)
BYPASS SWITCH
TD2 ENERGY SAVER
PW TEMP. CONTROL
CR3
24V
N.O.
COLD WATER THERMOSTAT
PW
PREWASH FLOAT
PW TANK FILL CENTURY ONLY
PREWASH LEVEL TIMER
TD1 FINAL RINSE
SV-2
FINAL RINSE
RINSE INJECTOR (IF USED)
PHOTO EYE
LIGHT
CLIPPER/MASTER ONLY
HI-TEMP SWITCH
WASH FLOAT
WASH LEVEL TIMER
SV-3
WASH TANK FILL
WASH TEMP. CONTROL
M3
WASH TANK HEAT
RINSE FLOAT
RINSE LEVEL TIMER
SV-4
RINSE TANK FILL
RINSE TEMP. CONTROL
M4
RINSE TANK HEAT
CONVEYOR JAM SWITCH
CR5
EMERGENCY CONVEYOR STOP CIRCUIT
CONVEYOR JAM LIGHT
120 VAC
SEE 1454-1
INTERIOR LIGHTS
SHEET 2 OF 2
U 1927 3.25.02
T 1777 11.18.98
S 1881 3.11.99
REV ECN NO DATE
FILE: WIRE\WFLT020
TITLE CLIPPER/MASTER/CENTURY ELECTRIC HEAT
DWG. NO. WFLT020
Insinger
Philadelphia, PA 19135
(215) 624-4800
FAX (215) 624-8988
DRWN/DATE RAF 05.06.05


L1 L2 L3
GRD
M7
RED
BLK
OL1
OL2
OL3
OL4
M2
ORN
FWD-OFF-REV
SEE SK-4344 FOR OPTIONAL VARI-SPEED MOTOR
1/2
CONVEYOR MOTOR
PREWASH PUMP MOTOR
WASH PUMP MOTOR
RINSE PUMP MOTOR
FU1
FU2
TRANSFORMER PRIMARY CONN.
208 VAC
L2 TO H1
L3 TO H4
220-230 VAC
L2 TO H1 & H3
L3 TO H2 & H4
380 VAC
L2 TO H1
L3 TO H7
H2 TO H6
460 VAC
L2 TO H1
L3 TO H4
L2 TO H3
X4
H7
X2
X3
H4
X1
120V
WHT
YEL
BLU
M1
CR6
CR7
OL5
OL6
OL7
OL8
OL9
35
36
37
38
39
40
1/3
HEAT CIRC FAN
BURNER BLOWER WASH
BURNER BLOWER RINSE #1
BURNER BLOWER RINSE #2
GRN
120 V AVAILABLE FOR INTERIOR LIGHTS WHEN SINGLE POINT CONNECTION IS SPECIFIED
CONNECT TO SPECIFIED VOLTAGE ON TRANSFORMER
H1 H2 H3 H4 H5 H6
H2= 208V
H3= 240V
H4= 277V
H5= 380V
H6= 480V
POWER ON
PINK
CIRCUIT BREAKER 10 AMPS
GRY
24VAC
LOAD/UNLOAD COVERS
DOOR PROXIMITY SWITCHES
POWER ON LIGHT
SEE SHEET 2 OF 3 FOR CONTINUATION OF 24V CONTROL CIRCUIT
120 VAC
SEE 1454-1
INTERIOR LIGHTS
SHEET 1 OF 3
B 1927 3.25.02
A 1855 2.9.01
REV ECN NO DATE
FILE: WIRE\WFLT070
TITLE MASTER GAS HEAT
DWG. NO. WFLT070
Insinger
Philadelphia, PA 19135
(215) 624-4500
FAX (215) 624-6965
DRWN/DATE MFJ 8.20.98


M1
START
PUMPS STOP
CONVEYOR STOP
N.O.
CONVEYOR STOP SW.
N.C.
JUMPER
LOW TEMP. CUTOUT
(IF USED)
BYPASS SWITCH
TDI ENERGY SAVER
OVERLOADS
OL2
OL3
OL4
OL5
OL6
DETERGENT DISPENSER
(IF USED)
SV-7
ENTRANCE FLUSH (IF USED)
TEMP. PROBE
PW TEMP. CONTROL
SV-8
COLD WATER THERMOSTAT
TDI FINAL RINSE
SV-2
FINAL RINSE
RINSE INJECTOR (IF USED)
PHOTO EYE
LIGHT
PREWASH FLOAT
PREWASH LEVEL TIMER
WASH FLOAT
WASH LEVEL TIMER
SV-3
WASH TANK FILL
WASH TEMP. CONTROL
WASH TANK HEAT
SEE SHEET 3 OF 3 FOR CONTINUATION OF 24V CONTROL CIRCUIT
TITLE
MASTER
GAS HEAT
DWG. NO.
WFLT070
Insinger
Philadelphia, PA 19135
(215) 624-4500
FAX (215) 624-6965
DRWN/DATE
MFJ
6.28.06
B 1927 3.23.02
A 1855 2.9.01
REV ECN NO DATE
FILE: WIRE\WFLT070
SHEET 2 OF 3



REV	ECN NO	DATE
B	1827	3.25.02
A	1855	2.9.01

FILE: WIRE\WFLT070

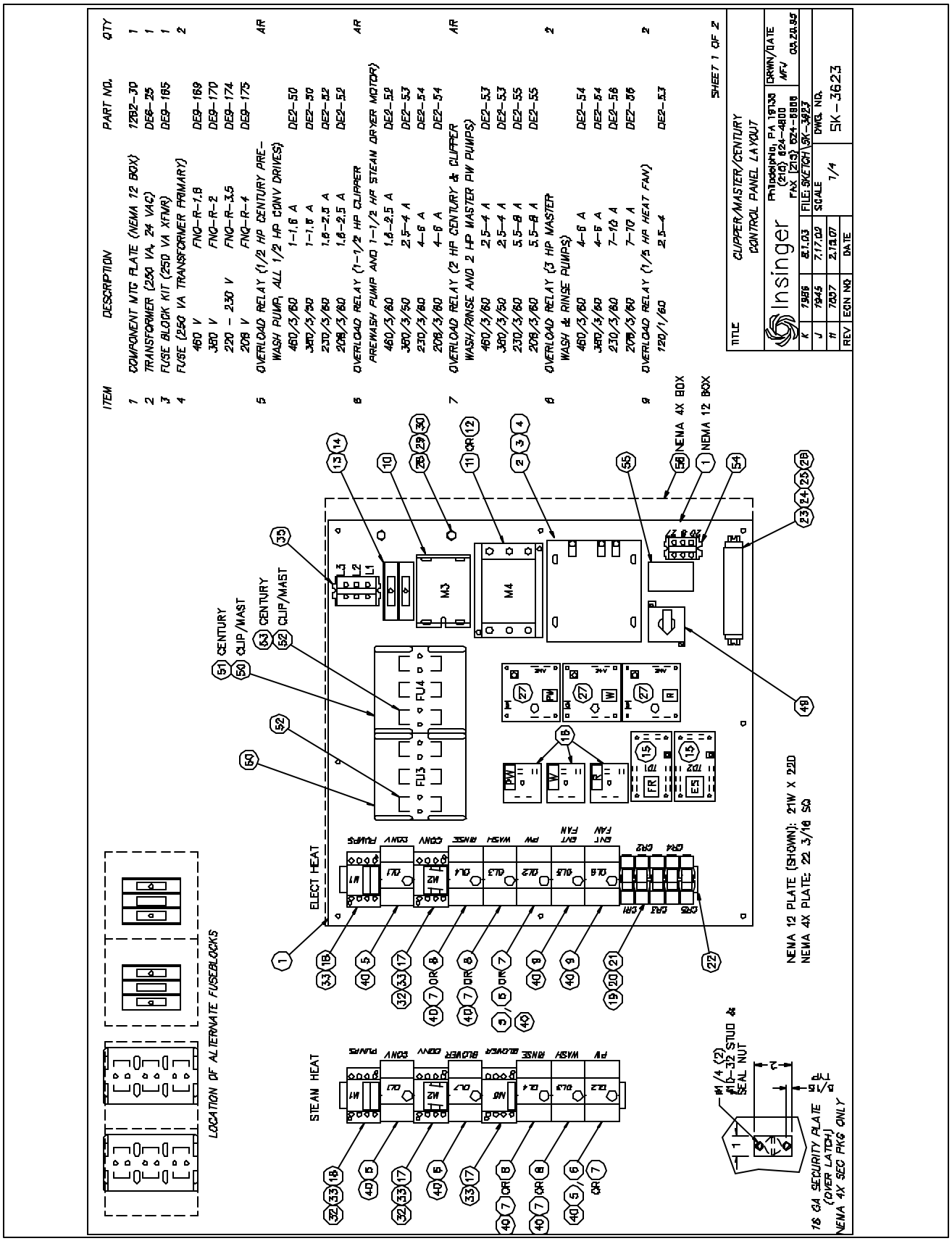
SHEET 3 OF 3

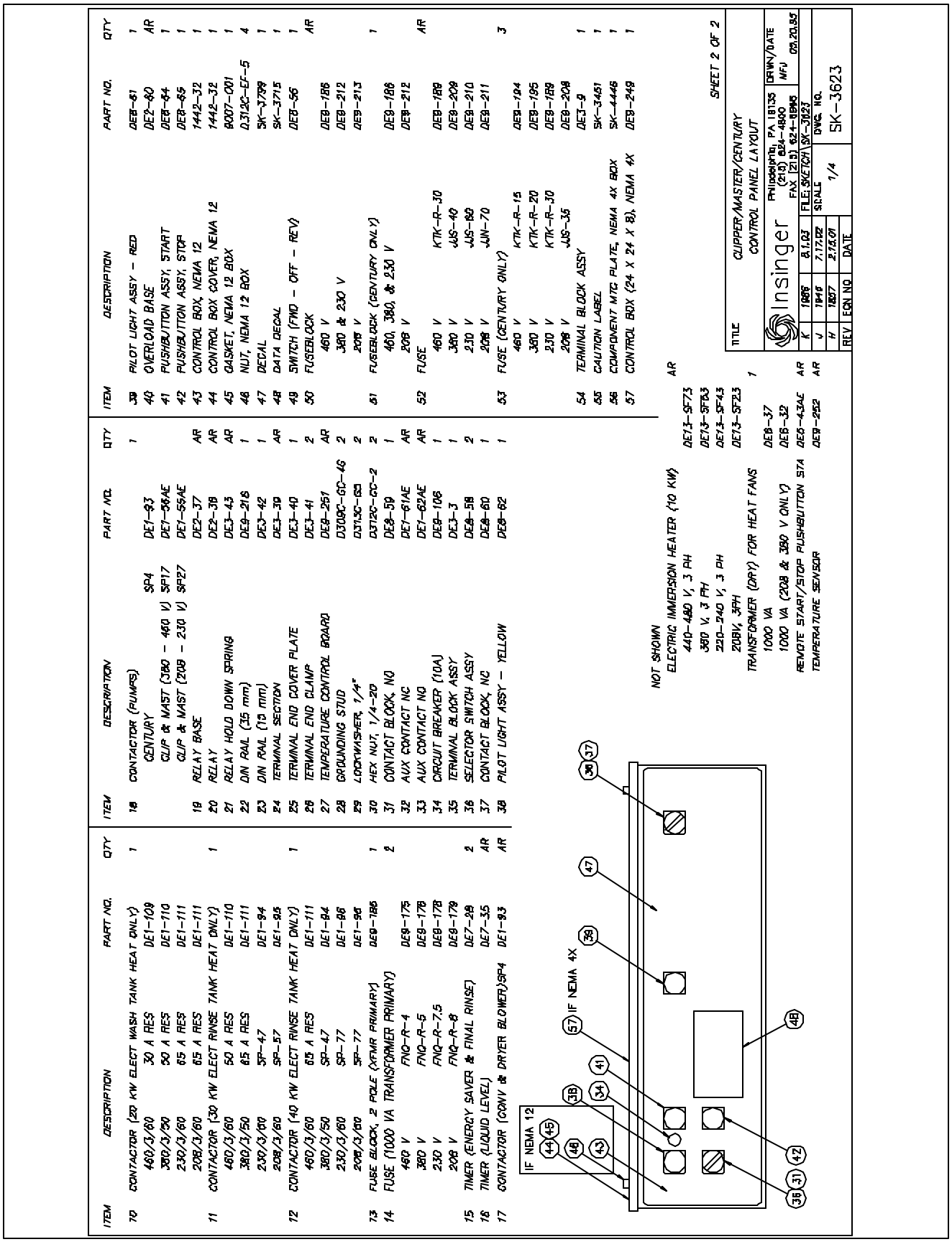
TITLE: MASTER GAS HEAT

DWG. NO. WFLT070

Insinger — Philadelphia, PA 19135 (215) 624-4600 FAX (215) 624-5966

DRWN/DATE MFJ 6.20.98


ITEM DESCRIPTION PART NO. QTY
1 COMPONENT MTG PLATE (NEMA 12 BOX) 1282-30 1
2 TRANSFORMER (250 VA, 24 VAC) DE6-25 1
3 FUSE BLOCK KIT (250 VA XFMR) DE9-165 1
4 FUSE (250 VA TRANSFORMER PRIMARY) 2
460 V FNQ-R-1.8 DE9-169
380 V FNQ-R-2 DE9-170
220 - 230 V FNQ-R-3.5 DE9-174
208 V FNQ-R-4 DE9-175
5 OVERLOAD RELAY (1/2 HP CENTURY PRE-WASH PUMP, ALL 1/2 HP CONV DRIVES) AR
460/3/60 1-1.6 A DE2-50
380/3/50 1-1.6 A DE2-50
230/3/60 1.6-2.5 A DE2-52
208/3/60 1.6-2.5 A DE2-52
6 OVERLOAD RELAY (1-1/2 HP CLIPPER AREWASH PUMP AND 1-1/2 HP STEAM DRYER MOTOR) AR
460/3/60 1.6-2.5 A DE2-52
380/3/50 2.5-4 A DE2-53
230/3/60 4-6 A DE2-54
208/3/60 4-6 A DE2-54
7 OVERLOAD RELAY (2 HP CENTURY & CLIPPER WASH/RINSE AND 2 HP MASTER PW PUMPS) AR
460/3/60 2.5-4 A DE2-53
380/3/50 2.5-4 A DE2-53
230/3/60 5.5-8 A DE2-55
208/3/60 5.5-8 A DE2-55
8 OVERLOAD RELAY (3 HP MASTER WASH & RINSE PUMPS) 2
460/3/60 4-6 A DE2-54
380/3/50 4-6 A DE2-54
230/3/60 7-10 A DE2-56
208/3/60 7-10 A DE2-56
9 OVERLOAD RELAY (1/3 HP HEAT FAN) 2
120/1/60 2.5-4 DE2-53
SHEET 1 OF 2
TITLE CLIPPER/MASTER/CENTURY CONTROL PANEL LAYOUT
Insinger Philadelphia, PA 19130 (215) 824-4800 FAX (215) 824-8808
DRWN/DATE MFV 03.28.05
K 1986 8.1.03 FILE: SKETCH SK-3623
J 1946 7.17.09 SCALE 1/4 DWG. NO. SK-3623
H 7057 2.15.07
REV ECN NO. DATE
NEMA 4X BOX
NEMA 12 BOX
CENTURY CLIP/MAST
CENTURY CLIP/MAST
LOCATION OF ALTERNATE FUSEBLOCKS
ELECT HEAT
STEAM HEAT
NEMA 12 PLATE (SHOWN): 21W X 22D
NEMA 4X PLATE: 22 3/16 SQ
#10-32 STUD & SEAL NUT
16 GA SECURITY PLATE (OVER LATCH) NEMA 4X SEC PKG ONLY



ITEM	DESCRIPTION	PART NO.	QTY
10	CONTACTOR (20 KW ELECT WASH TANK HEAT ONLY)		1
	460/3/60 30 A RES	DE1-109	
	380/3/50 50 A RES	DE1-110	
	230/3/60 65 A RES	DE1-111	
	208/3/60 65 A RES	DE1-111	
11	CONTACTOR (30 KW ELECT RINSE TANK HEAT ONLY)		1
	460/3/60 50 A RES	DE1-110	
	380/3/50 65 A RES	DE1-111	
	230/3/60 SP-47	DE1-94	
	208/3/60 SP-57	DE1-95	
12	CONTACTOR (40 KW ELECT RINSE TANK HEAT ONLY)		1
	460/3/60 65 A RES	DE1-111	
	380/3/50 SP-47	DE1-94	
	230/3/60 SP-77	DE1-96	
	208/3/60 SP-77	DE1-96	
13	FUSE BLOCK, 2 POLE (XFMR PRIMARY)	DE9-186	1
14	FUSE (10000 VA TRANSFORMER PRIMARY)		2
	460 V FNQ-R-4	DE9-175	
	380 V FNQ-R-5	DE9-176	
	230 V FNQ-R-7.5	DE9-178	
	208 V FNQ-R-8	DE9-179	
15	TIMER (ENERGY SAVER & FINAL RINSE)	DE7-29	2
16	TIMER (LIQUID LEVEL)	DE7-35	AR
17	CONTACTOR (CONV & DRYER BLOWER)SP4	DE1-93	AR
18	CONTACTOR		1
	460/3/60 SP4	DE1-93	
	380/3/50 SP17	DE1-55AE	
	230/3/60 SP27	DE1-55AE	
19	RELAY BASE	DE2-37	AR
20	RELAY	DE2-38	AR
21	RELAY HOLD DOWN SPRING	DE3-43	AR
22	DIN RAIL (35 mm)	DE9-216	1
23	DIN RAIL (15 mm)	DE3-42	1
24	TERMINAL SECTION	DE3-39	AR
25	TERMINAL END COVER PLATE	DE3-40	1
26	TERMINAL END CLAMP	DE3-41	2
27	TEMPERATURE CONTROL BOARD	DE9-251	AR
28	GROUNDING STUD	D3108C-GC-46	2
29	LOCKWASHER, 1/4"	D3136C-62	2
30	HEX NUT, 1/4-20	D3126C-GC-2	2
31	CONTACT BLOCK, NO	DE8-59	1
32	AUX CONTACT NC	DE1-61AE	AR
33	AUX CONTACT NO	DE1-62AE	AR
34	CIRCUIT BREAKER (10A)	DE9-106	1
35	TERMINAL BLOCK ASSY	DE3-3	1
36	SELECTOR SWITCH ASSY	DE8-58	2
37	CONTACT BLOCK, NC	DE8-60	1
38	PILOT LIGHT ASSY - YELLOW	DE8-62	1
39	PILOT LIGHT ASSY - RED	DE8-61	1
40	OVERLOAD BASE	DE2-40	AR
41	PUSHBUTTON ASSY, START	DE8-64	1
42	PUSHBUTTON ASSY, STOP	DE8-65	1
43	CONTROL BOX, NEMA 12	1442-32	1
44	CONTROL BOX COVER, NEMA 12	1442-32	1
45	GASKET, NEMA 12 BOX	R007-001	1
46	NUT, NEMA 12 BOX	D3126C-EF-5	4
47	DECAL	SK-3799	1
48	DATA DECAL	SK-3715	1
49	SWITCH (FWD - OFF - REV)	DE8-56	1
50	FUSEBLOCK		AR
	460 V	DE9-186	
	380 & 230 V	DE9-212	
	208 V	DE9-213	
51	FUSEBLOCK (CENTURY ONLY)		1
	460, 380, & 230 V	DE9-186	
	208 V	DE9-212	
52	FUSE		AR
	460 V KTK-R-30	DE9-189	
	380 V JJS-40	DE9-209	
	230 V JJS-60	DE9-210	
	208 V JJN-70	DE9-211	
53	FUSE (CENTURY ONLY)		3
	460 V KTK-R-15	DE9-194	
	380 V KTK-R-20	DE9-195	
	230 V KTK-R-30	DE9-189	
	208 V JJS-35	DE9-208	
54	TERMINAL BLOCK ASSY	DE3-9	1
55	CAUTION LABEL	SK-3451	1
56	COMPONENT MTG PLATE, NEMA 4X BOX	SK-4446	1
57	CONTROL BOX (24 X 24 X 8), NEMA 4X	DE9-249	1

NOT SHOWN

ELECTRIC IMMERSION HEATER (10 KW)		AR
440-480 V, 3 PH	DE13-SF73	
380 V, 3 PH	DE13-SF63	
220-240 V, 3 PH	DE13-SF43	
208V, 3PH	DE13-SF23	
TRANSFORMER (DRY) FOR HEAT FANS		1
1000 VA	DE8-37	
1000 VA (208 & 380 V ONLY)	DE8-32	
REMOTE START/STOP PUSHBUTTON STA	DE8-43AE	AR
TEMPERATURE SENSOR	DE9-252	AR

TITLE: CLIPPER/MASTER/CENTURY
CONTROL PANEL LAYOUT

Insinger — Philadelphia, PA 19135 (215) 624-4800 FAX (215) 624-8965

REV	DRWN	DATE
K	1986	8.1.03
J	1946	7.17.02
H	1857	2.14.01
REV	EGN NO	DATE

FILE: SKETCH SK-3623
SCALE: 1/4
DWG NO. SK-3623
DRWN/DATE MFJ 03.20.95

SHEET 2 OF 2

ITEM	DESCRIPTION	PART NO.	QTY
1	COMPONENT MTG PLATE (NEMA 12 BOX)	SK-4171	1
2	TRANSFORMER (250 VA, 24 VAC)	DE8-25	1
3	FUSE BLOCK KIT (250 VA XFMR)	DE9-765	1
4	FUSE (250 VA TRANSFORMER PRIMARY)		2
	460 V FNQ-R-1.8	DE9-769	
	380 V FNQ-R-2	DE9-170	
	220 – 230 V FNQ-R-3.5	DE9-174	
	208 V FNQ-R-4	DE9-175	
5	OVERLOAD RELAY (1/2 HP CENTURY PRE-WASH PUMP, ALL 1/2 HP CONV DRIVES)		AR
	480/3/60 1-1.8 A	DE2-50	
	380/3/50 1-1.6 A	DE2-50	
	230/3/60 1.6-2.5 A	DE2-52	
	208/3/60 1.6-2.5 A	DE2-52	
6	OVERLOAD RELAY (1-1/2 HP CLIPPER PREWASH PUMP		AR
	480/3/60 1.6-2.5 A	DE2-52	
	380/3/50 2.5-4 A	DE2-53	
	230/3/60 4-6 A	DE2-54	
	208/3/60 4-6 A	DE2-54	
7	OVERLOAD RELAY (2 HP CENTURY & CLIPPER WASH/RINSE AND 2 HP MASTER PW PUMPS)		AR
	480/3/60 2.5-4 A	DE2-53	
	380/3/50 2.5-4 A	DE2-53	
	230/3/60 5.5-8 A	DE2-55	
	208/3/60 5.5-8 A	DE2-55	
8	OVERLOAD RELAY (3 HP MASTER WASH & RINSE PUMPS)		2
	480/3/60 4-6 A	DE2-54	
	380/3/50 4-6 A	DE2-54	
	230/3/60 7-10 A	DE2-56	
	208/3/60 7-10 A	DE2-56	
9	OVERLOAD RELAY (1/5 HP HEAT FAN)		2
	120/1/60 2.5-4	DE2-53	

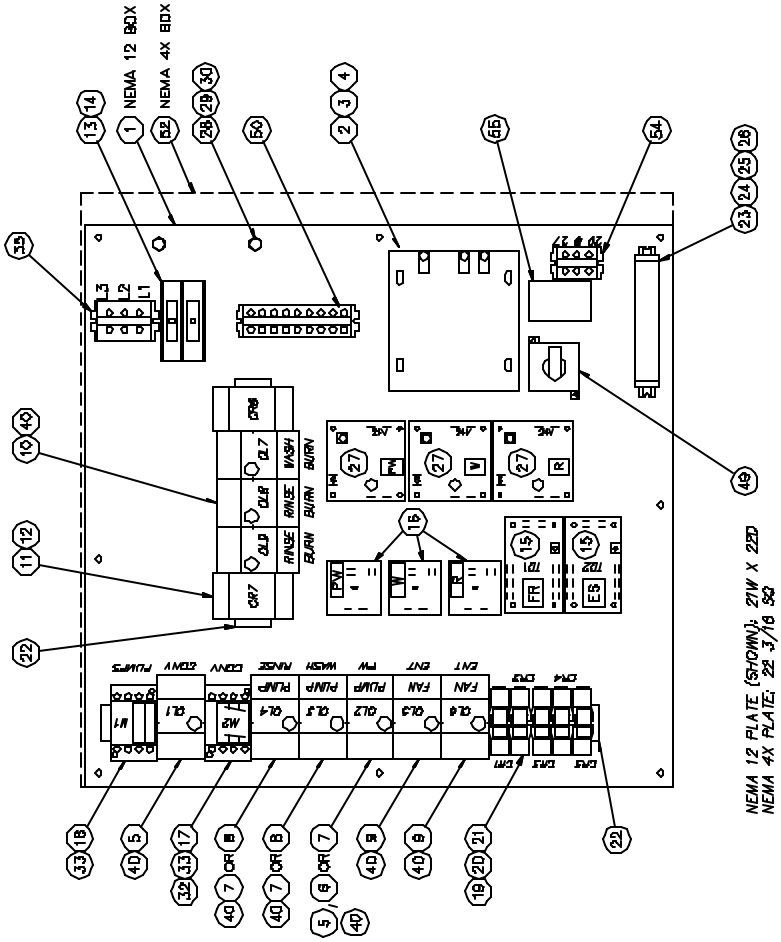
SHEET 1 OF 2

TITLE	GAS MASTER CONTROL PANEL LAYOUT

Insinger — Philadelphia, PA 19136 (215) 624-4000 FAX (215) 624-8900 — DRWN/DATE MFJ 8.28.00

REV	ECN NO	DATE
F	1986	8.1.03
E	1946	7.17.02
D	1857	2.15.01

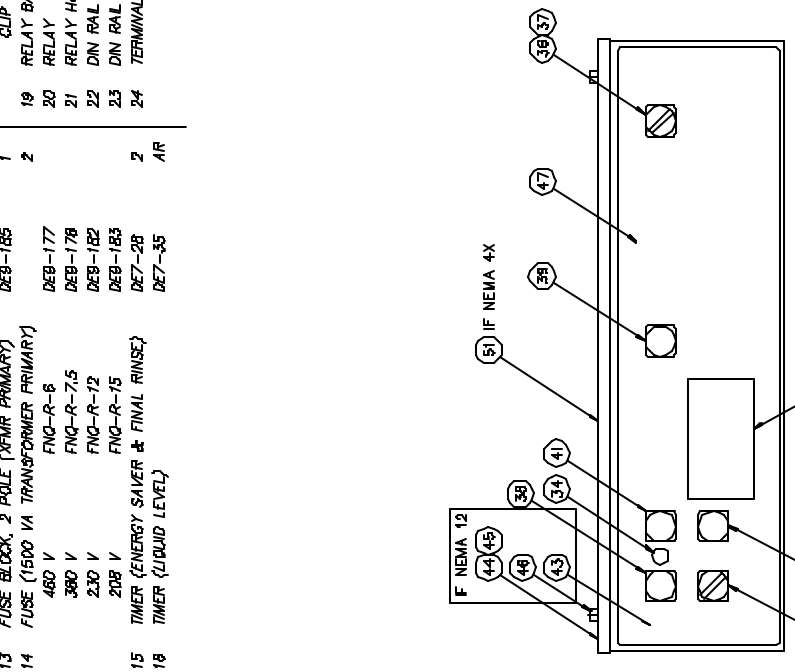
FILE: SKETCH\SK-4170 | SCALE 1/4 | DWG. NO. SK-4170



ITEM	DESCRIPTION	PART NO.	QTY
10	OVERLOAD RELAY (BURNER BLOWER)		3
	120/1/60 .63-1 A	DE2-49	
11	RELAY	DE2-12	2
12	RELAY BASE	DE3-25	2
13	FUSE BLOCK, 2 POLE (XFMR PRIMARY)	DE9-185	1
14	FUSE (1500 VA TRANSFORMER PRIMARY)		2
	460 V FNQ-R-6	DE9-177	
	380 V FNQ-R-7.5	DE9-178	
	230 V FNQ-R-12	DE9-182	
	208 V FNQ-R-15	DE9-183	
15	TIMER (ENERGY SAVER & FINAL RINSE)	DE7-28	2
16	TIMER (LIQUID LEVEL)	DE7-35	AR
17	CONTACTOR (CONV & DRYER BLOWER) SP4	DE7-93	AR
18	CONTACTOR (PUMPS)		1
	CENTURY SP4	DE7-93	
	CLIP & MAST (380 - 460 V) SP17	DE7-58AE	
	CLIP & MAST (208 - 230 V) SP27	DE7-59AE	
19	RELAY BASE	DE2-37	AR
20	RELAY	DE2-38	AR
21	RELAY HOLD DOWN SPRING	DE3-43	AR
22	DIN RAIL (35 mm)	DE9-216	2
23	DIN RAIL (15 mm)	DE3-42	1
24	TERMINAL SECTION	DE3-39	AR
25	TERMINAL END COVER PLATE	DE3-40	1
26	TERMINAL END CLAMP	DE3-41	2
27	TEMPERATURE CONTROL BOARD	DE9-251	AR
28	GROUNDING STUD	D3096C-GC-4G	2
29	LOCKWASHER, 1/4"	D3136C-GS	2
30	HEX NUT, 1/4-20	D3126C-GC-2	2
31	CONTACT BLOCK, NO	DE8-58	1
32	AUX CONTACT NC	DE1-61AE	AR
33	AUX CONTACT NO	DE1-62AE	AR
34	CIRCUIT BREAKER (10A)	DE8-106	1
35	TERMINAL BLOCK ASSY	DE3-3	1
36	SELECTOR SWITCH ASSY	DE8-58	2
37	CONTACT BLOCK, NC	DE8-60	1
38	PILOT LIGHT ASSY - YELLOW	DE8-62	1
39	PILOT LIGHT ASSY - RED	DE8-61	1
40	OVERLOAD BASE	DE2-60	AR
41	PUSHBUTTON ASSY, START	DE8-64	1
42	PUSHBUTTON ASSY, STOP	DE8-65	1
43	CONTROL BOX, NEMA 12	1442-32	1
44	CONTROL BOX COVER, NEMA 12	1442-32	1
45	GASKET, NEMA 12 BOX	30007-001	1
46	NUT, NEMA 12 BOX	D3126C-EF-5	4
47	DECAL	SK-3709	1
48	DATA DECAL	SK-3715	1
49	SWITCH (FWD - OFF - REV)	DE8-56	1
50	TERMINAL BLOCK ASSY	DE3-759	1
51	CONTROL BOX (24 X 24 X 8), NEMA 4X	DE9-249	1
52	COMPONENT MTG PLATE, NEMA 4X BOX	SK-4445	1
53			
54	TERMINAL BLOCK ASSY	DE3-9	1
55	CAUTION LABEL	SK-3451	1

NOT SHOWN

IGNITION MODULE	D2883JA	3
PILOT LIGHT, WHITE	DE9-108	3
PILOT LIGHT, AMBER	DE9-109	3
DECAL, GAS BURNER LIGHTS	1430-31	3
TRANSFORMER (DRY)		1
7500 VA	DE8-44	
1500 VA (208 V ONLY)	DE8-49	
REMOTE START/STOP PUSHBUTTON STA	DE8-43AE	AR
TEMPERATURE SENSOR	DE9-252	AR



SHEET 2 OF 2

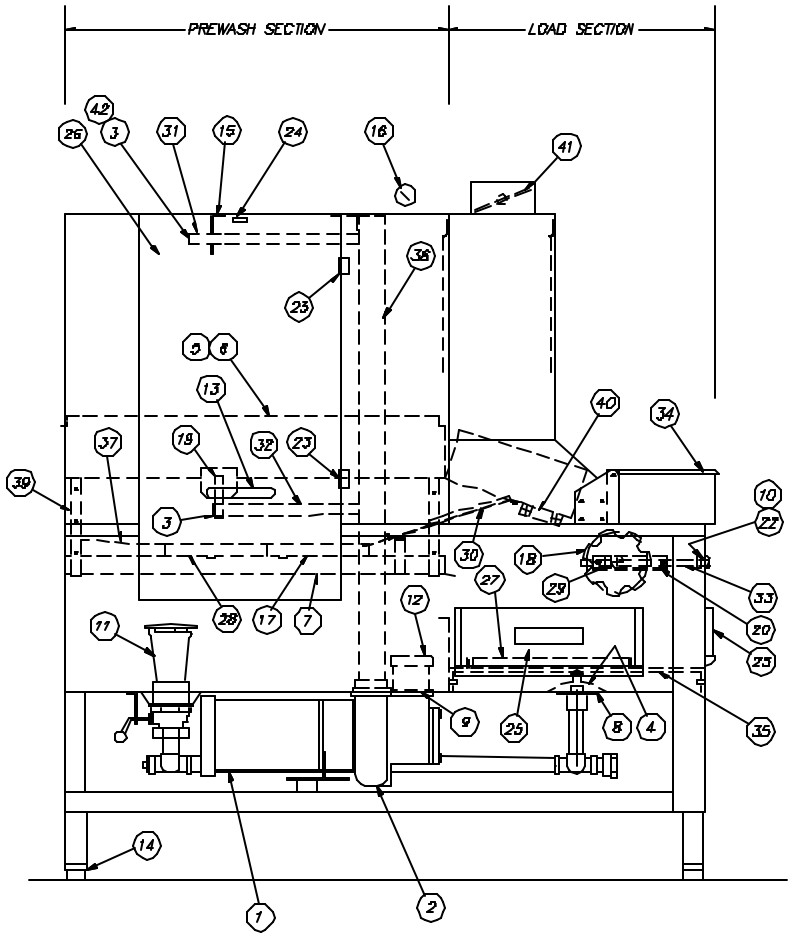
TITLE: GAS MASTER
CONTROL PANEL LAYOUT

Insinger
Philadelphia, PA 19135
(215) 624-4900
FAX (215) 624-6948

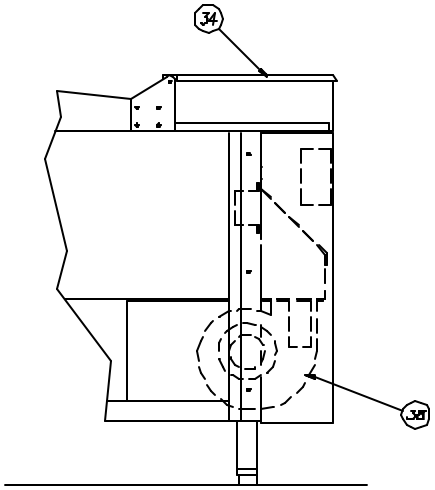
REV	ECN NO	DATE	DRWN/DATE
F	1305	8.1.01	MFJ 8.29.97
E	1246	7.17.02	FILE SKETCH SK-4170
D	1457	2.16.04	DWG NO.
REV	ECN NO	DATE	SCALE 1/4 — SK-417D

RECOMMENDED MASTER/CLIPPER SPARE PARTS LIST

Part Number	Quantity	Description
Mechanical Parts		
D2-554-1	4	End Plug 1/2”
D2-554-2	4	End Plug, 3/4”
D2-541	2	Suction Strainer
D2099	1	Handle, Door
D2349	1	Latch, Spray Pipe
D2-522S	1	Curtain
D2286	3	Spray Nozzle, FR
D2701	3	Spray Nozzle, FR
D2390	2	Temperature Gauge
954-50	1	Drain Assembly
D2-594	1	O-ring, Manifold
RC15-226	6	Section Link, Belt
D582	6	Roller, Belt
D2160	12	Cotter Pin, Belt
SK1115	24	Split Rivet, Belt
D2930RK	1	Solenoid Valve Repair Kit, 1/2”
D2242	1	Vacuum Breaker Repair Kit, 1/2”
Electrical Components		
DE7-28	1	Timer
DE7-35	1	Timer, Level
DE5-60	1	Level Float
DE9-251	1	Temperature Control Board
DE5-37	2	Magnetic Switch
DE5-4	1	MicroSwitch
For Steam Tank Heat Add:		
1 Each Solenoid Valve Repair Kits:		
D2947RK	1	
D2946RK	3/4”	
D2475	1 1/4”	
For Electric Heat Add:		
DE13-Sfy3		Immersion Heater y = Specify Voltage



RIGHT HAND MACHINE SHOWN (STEAM)



ELECTRIC MACHINE ONLY

SHEET 1 OF 2

CLIPPER\MASTER 2',3',4' LOAD–3' PW		
INSINGER MACHINE COMPANY	6245 State Rd. Philadelphia PA 19135–2996	Tel. 215–624–4800 FAX: 215–624–6966
SCALE: 1"–12	DWG. NO. SK–2605R	
DRAWN: PG 3.31.99		
APPROVED: MFJ 3.31.99		

FILE: SKETCH\SK–2605R

A ECN #2007 3.22.04

ITEM	PART NO.						PART NAME	REQ'D	
	STANDARD WIDTH			31" WIDE					
	STD HEIGHT	3" EX HIGH	6" EX HIGH	STD HEIGHT	3" EX HIGH	6" EX HIGH			
1	–	–	–	–	–	–	MOTOR (AS SPECIFIED)	1	
2	D-2471	D-2471	D-2471	D-2471	D-2471	D-2471	PUMP	1	
3	D2-554-2	D2-554-2	D2-554-2	D2-554-2	D2-554-2	D2-554-2	END PLUG	6	STD WIDTH
								7	31" WIDE
4	D-108	D-108	D-108	D-108	D-108	D-108	DRAIN STRAINER	1	
5	1113-46	1113-46	1113-46	1113-46	1113-46	1113-46	TRACK-UPPER FRONT	1	
6	1113-45	1113-45	1113-45	1113-45	1113-45	1113-45	TRACK-UPPER REAR	1	
7	1113-30	1113-30	1113-30	1113-30	1113-30	1113-30	TRACK-LOWER	2	2" LOAD
	1103-93	1103-93	1103-93	1103-93	1103-93	1103-93	TRACK-LOWER	2	3" LOAD
	1113-29	1113-29	1113-29	1113-29	1113-29	1113-29	TRACK-LOWER	2	4" LOAD
8	D-514	D-514	D-514	D-514	D-514	D-514	GASKET	1	
9	D-330	D-330	D-330	D-330	D-330	D-330	GASKET	1	
10	D-585	D-585	D-585	D-585	D-585	D-585	"O" RING-ADJ. SCREW	2	
11	954-1	954-1	954-1	954-1	954-1	954-1	DRAIN ASS'Y (SEE PARTS LIST)	1	
12	DZ-341	DZ-341	DZ-341	DZ-341	DZ-347	DZ-341	SUCTION STRAINER	1	
13	RC15-20 RC15-21	RC15-20 RC15-21	RC15-20 RC15-21	RC15-20 RC15-21	RC15-20 RC15-21	RC15-20 RC15-21	DOOR HANDLE & ROD	1	
14	D-2248	D-2248	D-2248	D-2248	D-2248	D-2248	ADJUSTABLE FOOT	4	
15	D-2349	D-2349	D-2349	D-2349	D-2349	D-2349	SPRAY PIPE LATCH	1	
16	D-2390	D-2390	D-2390	D-2390	D-2390	D-2390	THERMOMETER	1	
17	1105-83	1105-83	1105-83	1426-30	1426-30	1426-30	SCRAP SCREEN	*	
18	D2-138	D2-138	D2-138	D2-138	D2-138	D2-138	BELT SPROCKET	2	
19	1100-73	1100-73	1100-73	1426-105	1426-105	1426-105	CRADLE-SPRAY PIPES	1	
20	1100-147	1100-147	1100-147	1100-147	1100-147	1100-147	CHANNEL FOR SHAFT	2	
21	–	–	–	–	–	–	–	1	
22	D2-839	D2-839	D2-839	D2-839	D2-839	D2-839	COLLAR- ADJ. SCREW	2	
23	D-2715	D-2715	D-2715	D-2715	D-2715	D-2715	DOOR LATCH	1	
24	DE3-37	DE3-37	DE3-37	DE3-37	DE3-37	DE3-37	MAGNET\SWITCH	1	
25	1100-94	1100-94	1100-94	1100-94	1100-94	1100-94	DOOR-LOAD SECT.	2	STEAM MACH.
								1	ELECT. MACH.
26	1100-28	1442-33	1442-33	1100-28	1442-33	1442-33	DOOR-P.W.	1	
27	1100-37	1100-37	1100-37	1426-26	1426-26	1426-26	SCRAP SCREEN	2	2" LOAD
								3	3" LOAD
								4	4" LOAD
28	1100-61	1100-61	1100-61	1426-28	1426-28	1426-28	SCRAP SCREEN	*	
29	1100-148	1100-148	1100-148	1426-60	1426-60	1426-60	CONVEYER SHAFT	1	
30	1100-196	1100-196	1100-196	1465-19R	1465-19R	1465-19R	BAFFLE-LOAD\PW	1	R.H. MACH
	1105-102	1105-102	1105-102	1426-91	1426-91	1426-91			L.H. MACH
31	1100-357A	1100-357A	1100-357A	1100-357B	1100-357B	1100-357B	MANIFOLD ASS'Y-UPPER	1	
32	1100-71	1100-71	1100-71	1426-49	1426-49	1426-49	MANIFOLD ASS'Y-LOWER	1	
33	1100-142	1100-142	1100-142	1100-142	1100-142	1100-142	ADJUSTABLE SCREW	2	
34	1100-134	1100-134	1100-134	1426-65	1426-65	1426-65	END REST	1	STEAM MACH.
	1375-11	1375-11	1375-11	1426-76	1426-76	1426-76			ELECT. MACH.
35	1100-38	1100-38	1100-38	1100-38	1100-38	1100-38	SCRAP SCREEN SUPPORT	1	
36	1113-43	1113-43	1113-43	1113-43	1113-43	1113-43	DISCHARGE TUBE ASS'Y	1	
37	1100-198	1100-198	1100-198	1426-29	1426-29	1426-29	TRAY SPACER	7	R.H. MACH
	1105-96	1105-96	1105-96	1426-92	1426-92	1426-92			L.H. MACH
38	SCS08	SCS08	SCS08	SCS08	SCS08	SCS08	BLOWER, 120 VAC	2	
39	1100-30	1100-30	1100-30	1426-22	1426-22	1426-22	TRACK SUPPORT	2	
40	1100-65	1100-65	1100-65	1426-21	1426-21	1426-21	TRACK SUPPORT	1	
41	D2-728	D2-728	D2-728	D2-728	D2-728	D2-728	DAMPER BLADE	1	
42	D3-336	D3-336	D3-336	D3-336	D3-336	D3-336	END PLUG RETAINER	6	

* ITEM 17 QUANTITY 1 R.H. MACHINE – 0 L.H. MACHINE
ITEM 28 QUANTITY 1 R.H. MACHINE – 2 L.H. MACHINE

SHEET 2 OF 2

CLIPPER\MASTER
2',3',4' LOAD-3' PW

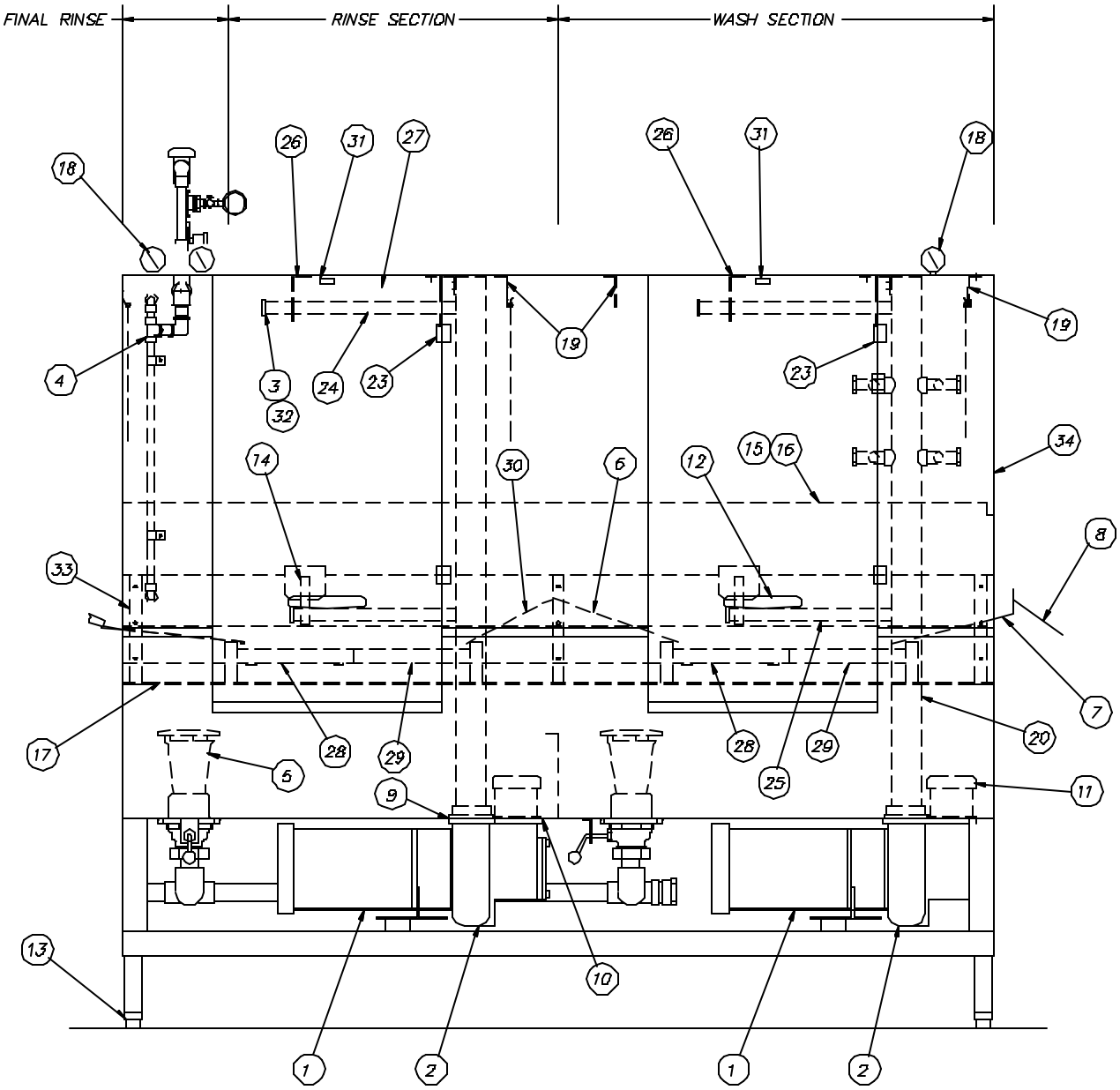
INSINGER MACHINE COMPANY
8345 State Rd. Philadelphia PA 19136-2995
Tel 215-624-4800 FAX: 215-624-6866

SCALE:	1"=12
DRAWN:	PC 3.31.99
APPROVED:	MFJ 3.31.99

DWG. NO. SK-2605R

⚠ ECN #2097 3.22.04

S: SKETCH\SK-2605R



RIGHT HAND MACHINE SHOWN

SHEET 1 OF 2

CLIPPER
WASH & RINSE SECTION

INSINGER MACHINE COMPANY
6245 State Rd. Philadelphia PA 19135-2996
Tel. 215-624-4800 FAX: 215-624-6966

SCALE: 1"=12	DWG. NO. SK-2610R
DRAWN: PG 4.16.99	
APPROVED: MFJ 4.16.99	

A ECN #2007 3.22.04

FILE: SKETCH\SK-2610R

ITEM	PART NO.						PART NAME	REQ'D	
	STANDARD WIDTH			31" WIDE					
	STD. HEIGHT	3" EX. HIGH	6" EX. HIGH	STD. HEIGHT	3" EX. HIGH	6" EX. HIGH			
1	–	–	–	–	–	–	MOTOR (AS SPECIFIED)	2	
2	D-2471	D-2471	D-2471	D-2471	D-2471	D-2477	PUMP	2	
3	D2-554-2	D2-554-2	D2-554-2	D2-554-2	D2-554-2	D2-554-2	END PLUG	12	
4	1100-330	1100-330	1100-330	1465-20	1465-20	1465-20	FINAL RINSE ASS'Y (SEE PARTS LIST)	1	
5	954-1	954-1	954-1	954-1	954-1	954-1	DRAIN ASS'Y (SEE PARTS LIST)	3	
6	1100-193	1100-193	1100-193	1463-16R	1463-16R	1463-16R	BAFFLE-CENTER	1	R.H. MACH.
	1113-33	1113-33	1113-33	1466-22	1465-22	1465-22			L.H. MACH.
7	1100-194	1100-194	1100-194	1465-18R	1465-18R	1465-18R	BAFFLE-WASH	1	R.H. MACH.
	1113-34	1113-34	1113-34	1465-24	1465-24	1465-24			L.H. MACH.
8	1100-195	1100-195	1100-195	1426-34	1426-34	1426-34	BAFFLE-AT SPLIT	1	R.H. MACH.
	1105-106	1105-106	1105-106	1426-50	1426-60	1426-60			L.H. MACH.
9	D-614	D-614	D-614	D-614	D-614	D-614	GASKET	2	
10	D-530	D-530	D-530	D-530	D-530	D-530	GASKET	2	
11	D2-541	D2-541	D2-541	D2-541	D2-541	D2-541	SUCTION STRAINER	3	
12	RC13-20 RC15-21	RC13-20 RC15-21	RC13-20 RC15-21	RC13-20 RC15-21	RC13-20 RC15-21	RC13-20 RC15-21	DOOR HANDLE & ROD	2	
13	D-2245	D-2245	D-2245	D-2245	D-2245	D-2245	ADJUSTABLE FOOT	4	
14	1100-73	1100-73	1100-73	1426-105	1426-105	1426-105	CRADLE-SPRAY PIPES	2	
15	1113-48	1113-48	1113-48	1113-48	1113-48	1113-48	TRACK-UPPER FRONT	1	
16	1113-49	1113-49	1113-49	1113-49	1113-49	1113-49	TRACK-UPPER REAR	1	
17	1100-185	1100-185	1100-185	1100-185	1100-185	1100-185	TRACK-LOWER	2	R.H. MACH.
	1113-28	1113-28	1113-28	1113-28	1113-28	1113-28			L.H. MACH.
18	D-2390	D-2390	D-2390	D-2390	D-2390	D-2390	THERMOMETER	3	
19	1100-16R	1100-16R	1100-16R	1466-13R	1465-13R	1466-13R	BAFFLE-TOP	3	
20	1113-41A	1113-41B	1113-41C	1113-41A	1113-41B	1113-41C	DISCHARGE TUBE ASS'Y	2	
21	–	–	–	–	–	–	–	–	
22	–	–	–	–	–	–	–	–	
23	D-2715	D-2715	D-2715	D-2715	D-2715	D-2715	DOOR LATCH	4	
24	1100-359B	1100-359B	1100-359B	1100-359D	1100-359D	1100-359D	MANIFOLD ASS'Y UPPER	2	
25	1100-71	1100-71	1100-71	1426-49	1426-49	1426-49	MANIFOLD ASS'Y-LOWER	3	
26	D-2349	D-2349	D-2349	D-2349	D-2349	D-2349	SPRAY PIPE LATCH	2	
27	7100-28	1442-36	1442-36	7100-28	1442-36	1442-36	DOOR	2	
28	1100-81	1100-81	1100-81	1426-28	1426-28	1426-28	SCRAP SCREEN	2	
29	1104-73	1104-73	1104-73	1426-31	1426-31	1426-31	SCRAP SCREEN W&R DISCHARGE	2	
30	7100-192	1100-192	1100-192	1463-17R	1463-17R	1463-17R	BAFFLE-CENTER	1	R.H. MACH.
	7100-193	1100-193	1100-193	1463-162	1463-162	1463-162			L.H. MACH.
31	DE5-37	DE3-37	DE5-37	DE5-37	DE3-37	DE5-37	MAGNET\SWITCH	2	
32	D3-558-2	D3-558-2	D3-558-2	D3-558-2	D3-558-2	D3-558-2	END PLUG RETAINER	12	
33	1100-50	1100-50	1100-50	1426-21	1426-21	1426-21	TRACK SUPPORT	3	
34	1100-15	–	–	1426-41	–	1442-12	GASKET	2	

SHEET 2 OF 2

CLIPPER
WASH & RINSE SECTION

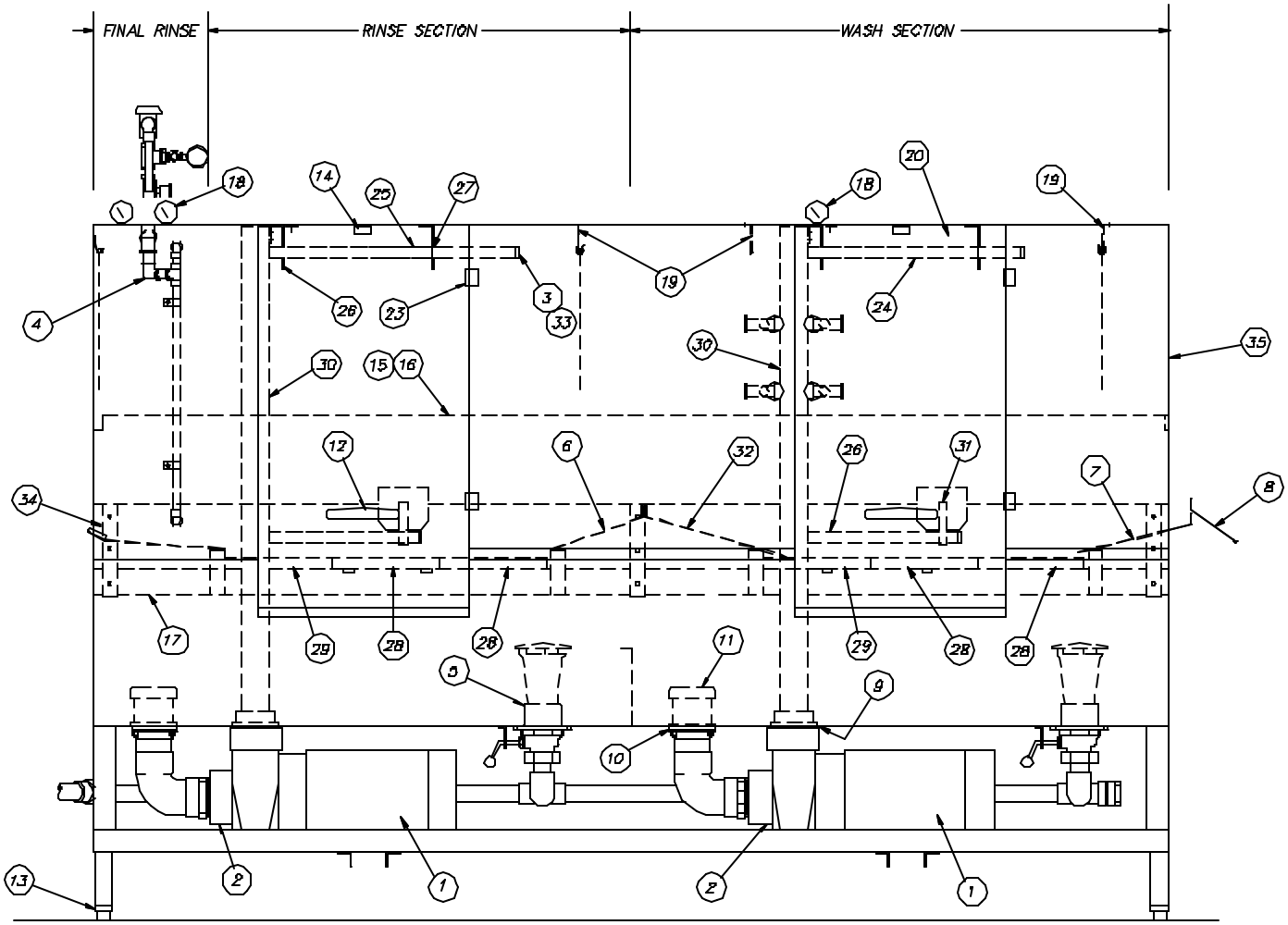
INSINGER MACHINE COMPANY
8345 State Rd. Philadelphia PA 19136-2996
Tel. 215-624-4500 FAX: 215-624-6966

SCALE:	1"=12
DRAWN:	PG 4.16.99
APPROVED:	MFJ 4.16.99

DWG. NO. SK-2610R

⚠ ECN #0007 3.22.04

TCH\SK-2610R



RIGHT HAND MACHINE SHOWN

SHEET 1 OF 2

MASTER WASH & RINSE SECTION	
INSINGER MACHINE COMPANY 6245 State Rd. Philadelphia PA 19135-2996 Tel. 215-624-4800 FAX: 215-624-5966	
SCALE: 1"=12 DRAWN: PG 4.9.99 APPROVED: MFV 4.9.99	DWG. NO. SK-2846

⚠ ECN #2007 3.22.04

FILE: SKETCH\SK-2846

ITEM	PART NO.						PART NAME	REQ'D	
	STANDARD WIDTH			31" WIDE					
	STD HEIGHT	3" EX HIGH	6" EX HIGH	STD HEIGHT	3" EX HIGH	6" EX HIGH			
1	–	–	–	–	–	–	MOTOR (AS SPECIFIED)	2	
2	D2-2603	D2-2603	D2-2603	D2-2603	D2-2603	D2-2603	PUMP	2	
3	D2-554-2	D2-554-2	D2-554-2	D2-554-2	D2-554-2	D2-554-2	END PLUG	14	
4	1100-318	1100-318	1100-318	1100-318	1100-318	1100-318	FINAL RINSE ASS'Y (SEE PARTS LIST)	1	
5	954-1	954-1	954-1	954-1	954-1	954-1	DRAIN ASS'Y (SEE PARTS LIST)	2	
6	1104-71	1104-71	1104-71	1426-37	1426-37	1426-37	BAFFLE-CENTER	1	R.H. MACH.
	1105-138	1105-138	1105-138	1426-87	1426-87	1426-87			L.H. MACH.
7	1104-72	1104-72	1104-72	1426-38	1426-38	1426-38	BAFFLE-WASH	1	R.H. MACH.
	1105-140	1105-140	1105-140	1426-89	1426-89	1426-89			L.H. MACH.
8	1100-195	1100-195	1100-195	1426-34	1426-34	1426-34	BAFFLE-AT SPLIT	1	R.H. MACH.
	1105-106	1105-106	1105-106	1426-90	1426-90	1426-90			L.H. MACH.
9	1104-67	1104-67	1104-67	1104-67	1104-67	1104-67	GASKET	2	
10	D-530	D-530	D-530	D-530	D-530	D-530	GASKET	2	
11	D2-541	D2-541	D2-541	D2-541	D2-541	D2-541	SUCTION STRAINER	2	
12	RC15-20 RC15-21	RC15-20 RC15-21	RC15-20 RC15-21	RC15-20 RC15-21	RC15-20 RC15-21	RC15-20 RC15-21	DOOR HANDLE & ROD	2	
13	D-2248	D-2248	D-2248	D-2248	D-2248	D-2248	ADJUSTABLE FOOT	4	
14	DE5-37	DE5-37	DE5-37	DE5-37	DE5-37	DE5-37	MAGNET/SWITCH	2	
15	1104-50	1104-50	1104-50	1104-50	1104-50	1104-50	TRACK-UPPER FRONT	1	
16	1104-51	1104-51	1104-51	1104-51	1104-51	1104-51	TRACK-UPPER REAR	1	
17	1104-39	1104-39	1104-39	1104-39	1104-39	1104-39	TRACK-LOWER	2	R.H. MACH.
	1105-135	1105-135	1105-135	1105-135	1105-135	1105-135			L.H. MACH.
18	D-2390	D-2390	D-2390	D-2390	D-2390	D-2390	THERMOMETER	3	
19	1104-10R	1104-10R	1104-10R	1426-33	1426-33	1426-33	BAFFLE-TOP	3	
20	1100-28	1442-35	1442-35	1100-28	1442-35	1442-35	DOOR	2	
21	–	–	–	–	–	–	–	–	
22	–	–	–	–	–	–	–	–	
23	D-2715	D-2715	D-2715	D-2715	D-2715	D-2715	DOOR LATCH	4	
24	1104-95A	1104-95A	1104-95A	1104-95C	1104-95C	1104-95C	MANIFOLD ASS'Y-UPPER-WASH	1	
25	1104-96A	1104-96A	1104-96A	1104-96C	1104-96C	1104-96C	MANIFOLD ASS'Y-UPPER-RINSE	1	
26	1104-60	1104-60	1104-60	1426-47	1426-47	1426-47	MANIFOLD ASS'Y-LOWER	2	
27	D-2349	D-2349	D-2349	D-2349	D-2349	D-2349	SPRAY PIPE LATCH	2	
28	1100-61	1100-61	1100-61	1426-28	1426-28	1426-28	SCRAP SCREEN	4	
29	1104-73	1104-73	1104-73	1426-31	1426-31	1426-31	SCRAP SCREEN W&R DISCHARGE	2	
30	1104-64A	1104-64B	1104-64C	1104-64A	1104-64B	1104-64C	DISCHARGE TUBE ASS'Y	2	
31	1100-73	1100-73	1100-73	1426-105	1426-105	1426-105	CRADLE-SPRAY PIPES	2	
32	1104-45	1104-45	1104-45	1426-40	1426-40	1426-40	BAFFLE-CENTER	1	R.H. MACH.
	1105-139	1105-139	1105-139	1426-88	1426-88	1426-88			L.H. MACH.
33	D3-558-2	D3-558-2	D3-558-2	D3-558-2	D3-558-2	D3-558-2	END PLUG RETAINER	14	
34	1100-50	1100-50	1100-50	1426-21	1426-21	1426-21	TRACK SUPPORT	3	
35	1100-15	–	–	1426-41	–	1442-12	GASKET	2	

SHEET 2 OF 2

⚠ ECN #2007 3.22.04

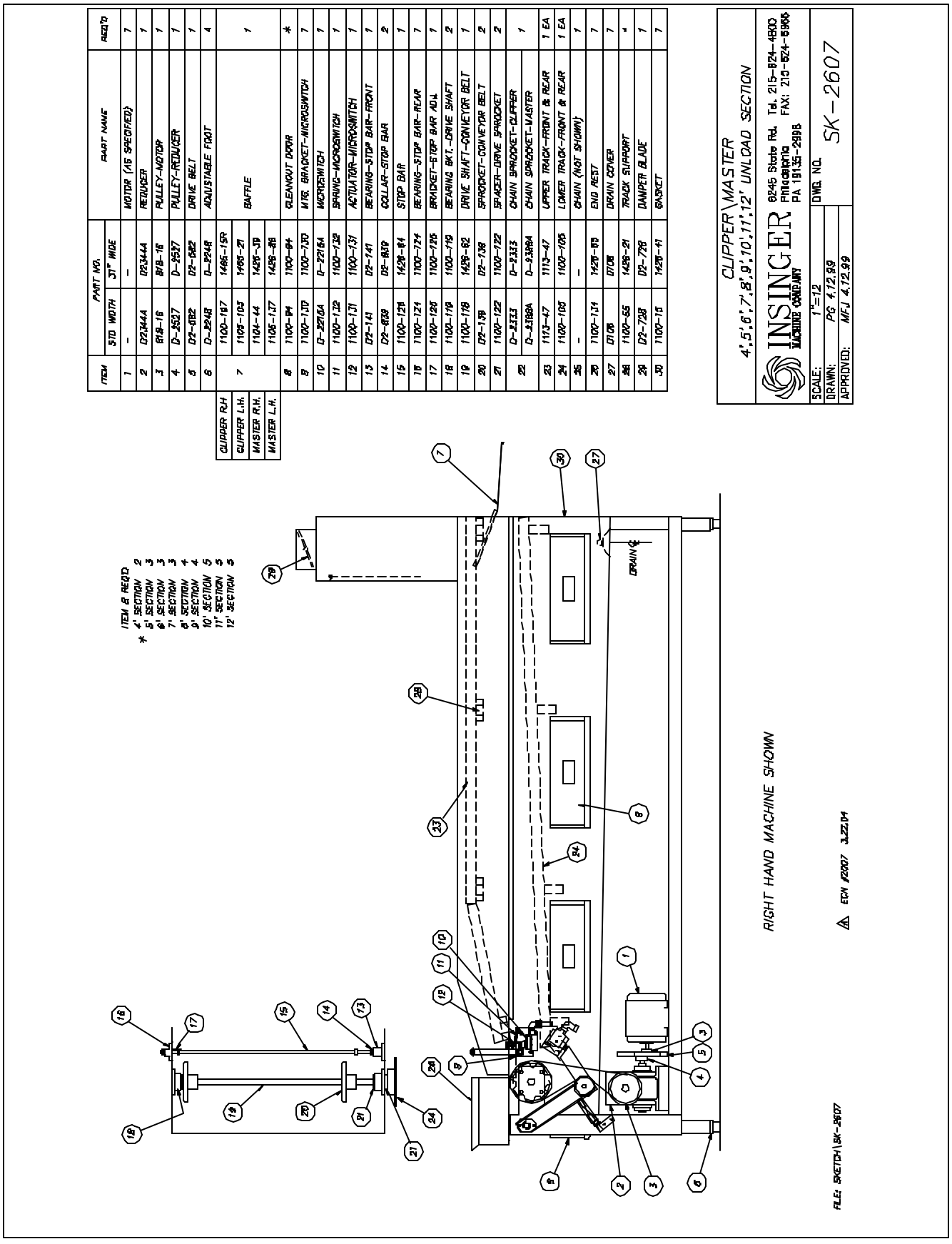
MASTER
WASH & RINSE SECTION

INSINGER MACHINE COMPANY
6245 State Rd. Philadelphia PA 19135-2996
Tel. 215-624-4800 FAX: 215-624-6966

SCALE:	1"=12
DRAWN:	PG 4.9.99
APPROVED:	MFJ 4.9.99

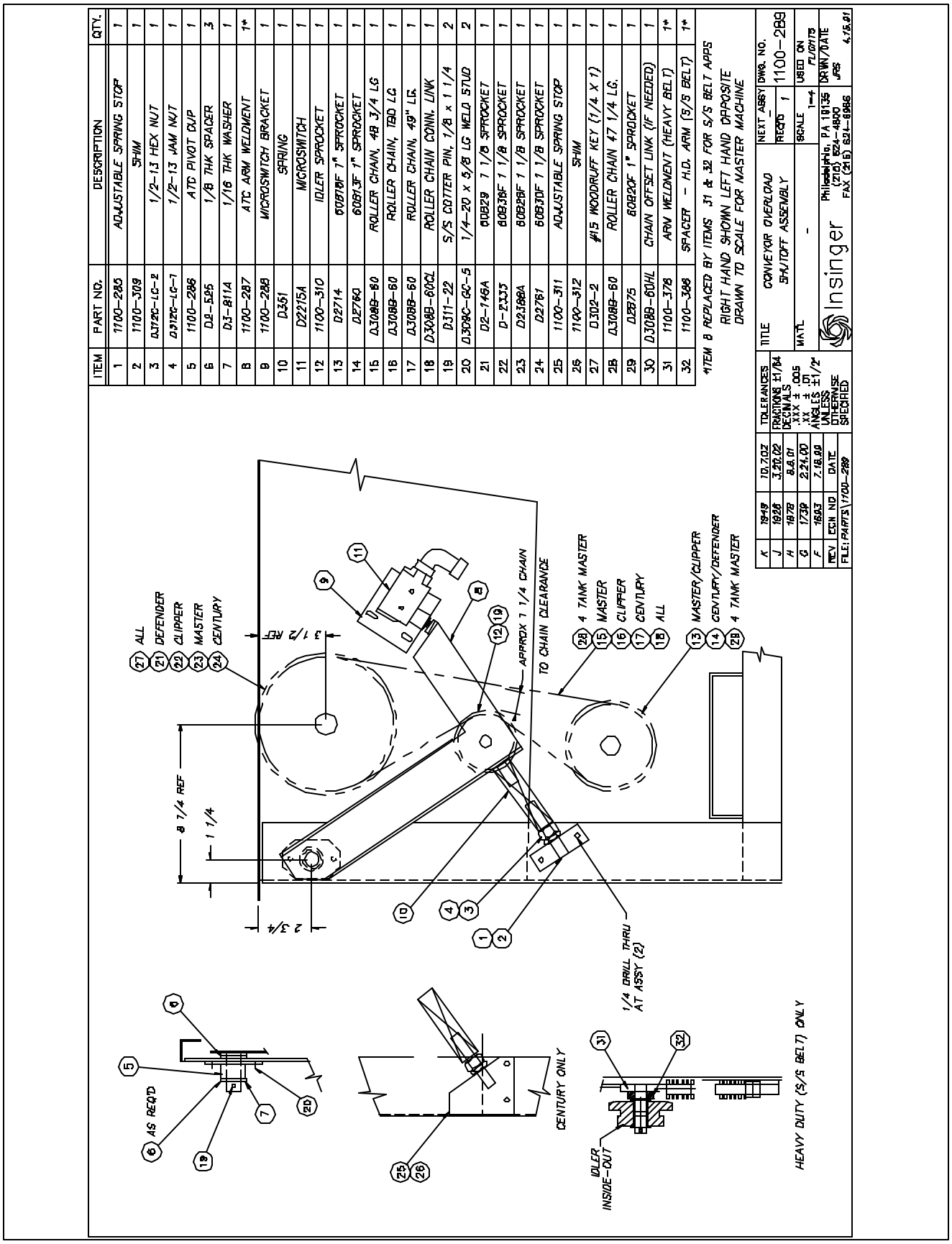
DWG. NO. SK-2846

SKETCH\SK-2846

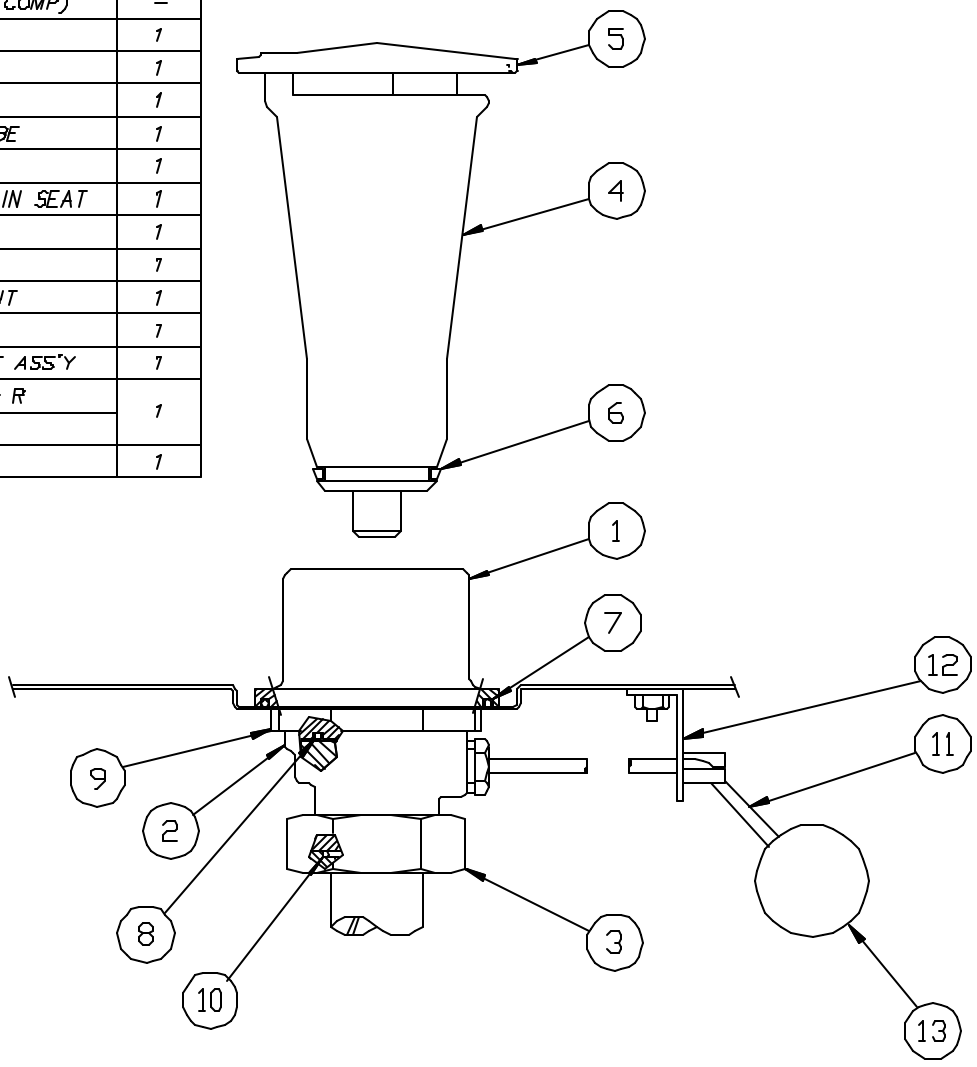


ITEM	PART NO. STD WIDTH	PART NO. 37" WIDE	PART NAME	REQ'D
1	–	–	MOTOR (AS SPECIFIED)	7
2	023444	023444	REDUCER	1
3	618-16	618-16	PULLEY-MOTOR	1
4	D-2527	D-2527	PULLEY-REDUCER	1
5	012-682	012-682	DRIVE BELT	1
6	D-2248	D-2248	ADJUSTABLE FOOT	4
CLIPPER R.H.	1100-117	1485-1SR	BAFFLE	1
CLIPPER L.H.	1105-103	1485-2T		
MASTER R.H.	1104-44	1425-3B		
MASTER L.H.	1105-137	1425-4B		
8	1100-124	1100-64	CLEANOUT DOOR	*
9	1100-110	1100-130	MTG. BRACKET-MICROSWITCH	1
10	D-22164	D-22164	MICROSWITCH	1
11	1100-132	1100-132	SPRING-MICROSWITCH	1
12	1100-131	1100-131	ACTUATOR-MICROSWITCH	1
13	012-141	012-141	BEARING-STOP BAR-FRONT	1
14	028-639	028-639	COLLAR-STOP BAR	2
15	1100-128	1426-61	STOP BAR	1
16	1100-124	1100-124	BEARING-STOP BAR-REAR	1
17	1100-126	1100-126	BRACKET-STOP BAR ADJ.	1
18	1100-119	1100-119	BEARING BKT.-DRIVE SHAFT	2
19	1100-118	1426-62	DRIVE SHAFT-CONVEYOR BELT	1
20	012-159	012-138	SPROCKET-CONVEYOR BELT	2
21	1100-122	1100-122	SPACER-DRIVE SPROCKET	2
22	D-2333	D-2333	CHAIN SPROCKET-CLIPPER	1
	D-21888A	D-23884	CHAIN SPROCKET-MASTER	
23	1113-47	1113-47	UPPER TRACK-FRONT & REAR	1 EA
24	1100-105	1100-1105	LOWER TRACK-FRONT & REAR	1 EA
25	–	–	CHAIN (NOT SHOWN)	1
26	1100-114	1425-6B	END REST	1
27	0106	0106	DRAIN COVER	1
28	1100-65	1426-21	TRACK SUPPORT	*
29	012-738	012-756	DAMPER BLADE	1
30	1100-15	1425-4T	GASKET	1

ITEM # REQ'D
4' SECTION 2
5' SECTION 3
6' SECTION 3
7' SECTION 3
8' SECTION 4
9' SECTION 4
10' SECTION 5
11' SECTION 5
12' SECTION 5


ITEM | PART NO. | DESCRIPTION | QTY.
1 | 1100-285 | ADJUSTABLE SPRING STOP | 1
2 | 1100-309 | SHIM | 1
3 | DJ12C-1C-2 | 1/2-13 HEX NUT | 1
4 | DJ12C-1C-7 | 1/2-13 JAM NUT | 1
5 | 1100-286 | ATD PIVOT CUP | 1
6 | DJ-5295 | 1/8 THK SPACER | 3
7 | DJ-8114 | 1/16 THK WASHER | 1
8 | 1100-287 | ATC ARM WELDMENT | 1*
9 | 1100-288 | MICROSWITCH BRACKET | 1
10 | DJ351 | SPRING | 1
11 | D22154 | MICROSWITCH | 1
12 | 1100-310 | IDLER SPROCKET | 1
13 | D2714 | 60B18F 1" SPROCKET | 1
14 | D2760 | 60B15F 1" SPROCKET | 1
15 | DJ08B-60 | ROLLER CHAIN, 48 3/4 LG | 1
16 | DJ08B-60 | ROLLER CHAIN, TBD LG | 1
17 | DJ08B-60 | ROLLER CHAIN, 49" LG. | 1
18 | DJ08B-60CL | ROLLER CHAIN CONN. LINK | 1
19 | DJ11-22 | S/S COTTER PIN, 1/8 x 1 1/4 | 2
20 | DJ08C-6C-5 | 1/4-20 x 5/8 LG WELD STUD | 2
21 | D2-746A | 08B29 1 1/8 SPROCKET | 1
22 | D-2335 | 80B36F 1 1/8 SPROCKET | 1
23 | D2388A | 80B28F 1 1/8 SPROCKET | 1
24 | D2761 | 80B30F 1 1/8 SPROCKET | 1
25 | 1100-311 | ADJUSTABLE SPRING STOP | 1
26 | 1100-312 | SHIM | 1
27 | D302-2 | #15 WOODRUFF KEY (1/4 X 1) | 1
28 | DJ08B-60 | ROLLER CHAIN 47 1/4 LG. | 1
29 | D2875 | 80B20F 1" SPROCKET | 1
30 | DJ08B-60HL | CHAIN OFFSET LINK (IF NEEDED) | 1
31 | 1100-378 | ARM WELDMENT (HEAVY BELT) | 1*
32 | 1100-368 | SPACER - H.D. ARM (S/S BELT) | 1*
*ITEM 8 REPLACED BY ITEMS 31 & 32 FOR S/S BELT APPS
RIGHT HAND SHOWN LEFT HAND OPPOSITE
DRAWN TO SCALE FOR MASTER MACHINE
TITLE CONVEYOR OVERLOAD SHUTOFF ASSEMBLY
MATL -
TOLERANCES FRACTIONS ±1/64 DECIMALS .XXX ± .005 .XX ± .01 ANGLES ±1/2° UNLESS OTHERWISE SPECIFIED
NEXT ASSY
REQ'D 1
SCALE 1=4
DWG. NO. 1100-289
USED ON FLIGHTS
DRWN/DATE JRS 4.15.01
Insinger Philadelphia, PA 19135 (215) 624-4800 FAX (215) 831-8986
K 1949 10.7.02
J 1926 3.20.02
H 1878 8.8.01
G 1739 2.24.00
F 1693 7.16.99
REV ECN NO DATE
FILE: PARTS\1100-289
ALL
DEFENDER
CLIPPER
MASTER
CENTURY
3 1/2 REF
8 1/4 REF
1 1/4
2 3/4
APPROX 1 1/4 CHAIN
TO CHAIN CLEARANCE
4 TANK MASTER
MASTER
CLIPPER
CENTURY
ALL
MASTER/CLIPPER
CENTURY/DEFENDER
4 TANK MASTER
1/4 DRILL THRU AT ASSY (2)
AS REQ'D
CENTURY ONLY
IDLER INSIDE-OUT
HEAVY DUTY (S/S BELT) ONLY

ITEM	PART NO.	NAME OF PART	REQ'D
	954-50	DRAIN ASS'Y (COMP)	–
1	954-50A	UPPER BODY	1
2	954-50B	LOWER BODY	1
3	954-50C	NUT	1
4	954-50D	OVERFLOW TUBE	1
5	D-193	SKIMMER CAP	1
6	D2-557	"V" SEAL-DRAIN SEAT	1
7	954-9	FLAT WASHER	1
8	D2-549	"O" RING	1
9	D-305	DRAIN JAM NUT	1
10	D2-550	"O" RING	1
11	1100-79	DRAIN HANDLE ASS'Y	1
12	954-8	BRACKET W & R	1
	954-8A	BRACKET P.W.	
13	D2-507	BALL	1



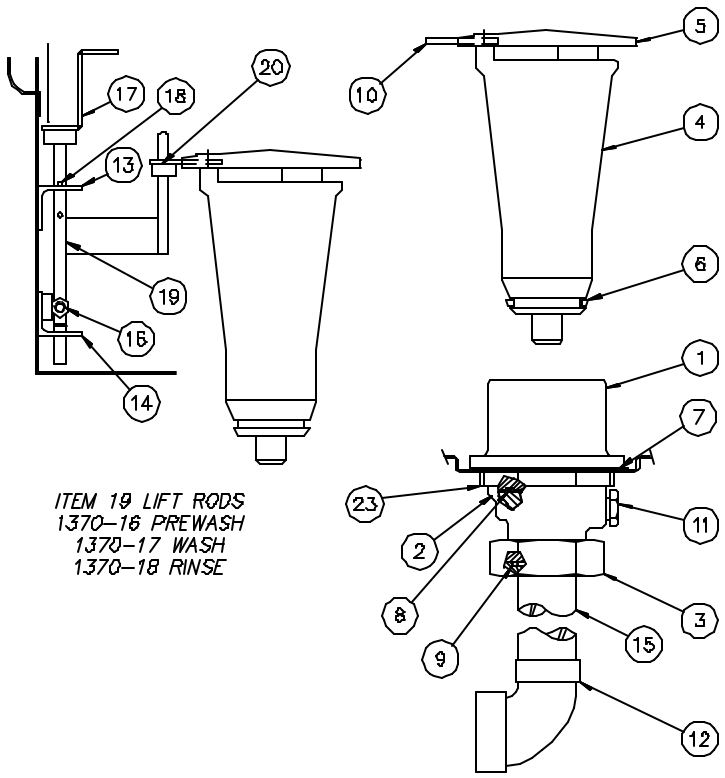
INSINGER DRAIN ASSEMBLY

INSINGER MACHINE COMPANY
6245 State Rd. Philadelphia PA 19135-2996
Tel. 215-624-4800 FAX: 215-624-6966

SCALE:	1=1	DWG. NO. SK-2613
DRAWN:	PG 4.19.99	
APPROVED:	MFJ 4.19.9	

⚠ ECN #2007 3.22.04

FILE: SKETCH\SK-2613



ITEM 19 LIFT RODS
1370–16 PREWASH
1370–17 WASH
1370–18 RINSE

ITEM	PART NO.	DESCRIPTION	QTY.
1	954–50A	UPPER VALVE BODY	1
2	954–50B	LOWER VALVE BODY	1
3	954–50C	O–RING NUT	1
4	954–50D	OVERFLOW TUBE	1
5	1370–3	SKIMMER CAP (MODIFIED)	1
6	D2–557	"V" SEAL	1
7	954–9	SEALING WASHER	1
8	D2–549	O RING	1
9	D2–550	O RING	2
10	1370–5	SKIMMER CAP TAB	1
11	1370–11	PLUG	1
12	D315A–H3–H1	90° ELL 1–1/2 C x 1–1/2 FPT	1
13	1370–6	UPPER BRACKET	1
14	1370–7	LOWER BRACKET	1
15	D–207A–B12–17	CU TUBE, 1–1/2 CTS x 4–1/4 LG	1
16	D2738	SPRING PLUNGER	1
17	1370–30	LIFT HANDLE	1
18	D311–8	ROLL PIN, 1/8 DIA	2
19	SEE TABLE	LIFT ROD	1
20	D2739	CLAMP COLLAR, 1/4 DIA	1
21	SK 3476	DECAL	1
22	1370–19	INSTALLATION NOTES	X
23	D305A	DRAIN JAM NUT	1

REV	ECN NO	DATE
C	1989	7.7.03
B	1268	08.22.95
A	1051	8.18.94
FILE: PARTS\1370–20		

TOLERANCES
FRACTIONS ±1/64
DECIMALS
.XXX ± .005
.XX ± .01
ANGLES ±1/2°
UNLESS OTHERWISE SPECIFIED

TITLE: DRAIN ASSY – SELF CLOSING
MASTER STEAM HEAT

NEXT ASSY: REQ'D 3

DWG. NO. 1370–20

MAT'L: NOTED

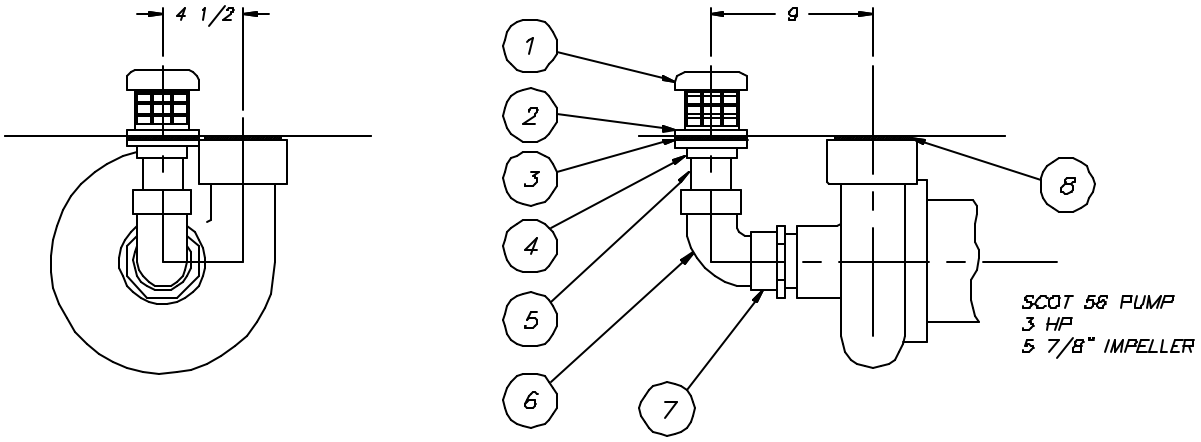
SCALE 1=4

USED ON MASTER

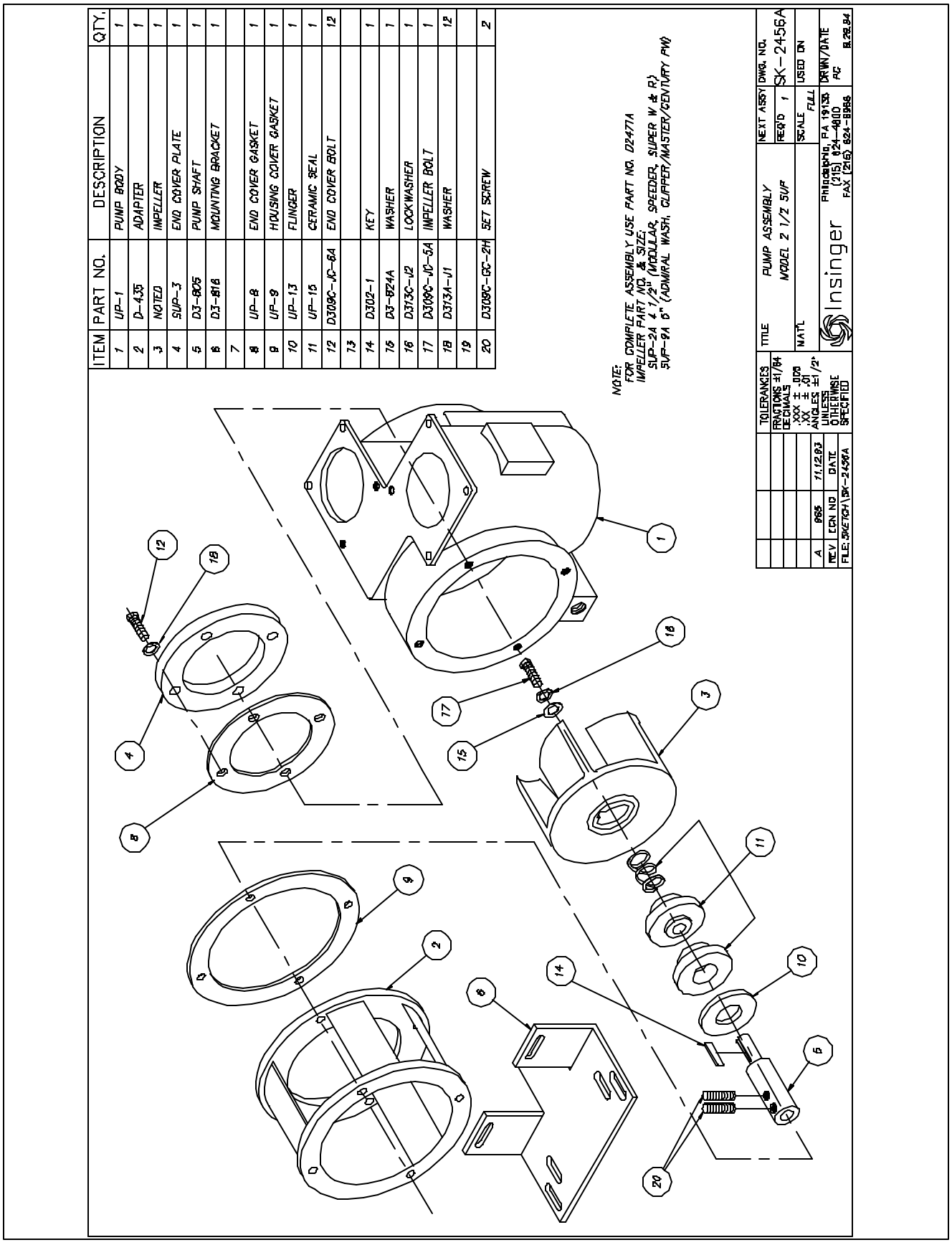
Insinger Machine Company
Philadelphia, PA 19135
(215) 624–4800
FAX (215) 624–6986

DRWN/DATE MFJ 10.16.92

ITEM	PART NO.	SIZE	DESCRIPTION	QTY.
1	D2-541	A	SUCTION STRAINER	1
2	D2-135	A	STRAINER FLANGE	1
3	D-530	A	GASKET	1
4	1104-68	A	TANK FLANGE	1
5	D207A-B21-11	–	COPPER TUBING 3" CTS X 2 3/4 LG.	1
6	D316A-L3-L4	–	90° FTG. ELBOW 3" C	1
7	D317A-L2-L3	–	ADAPTER 3" MIPS X 3" C	1
8	1104-67	A	GASKET	1



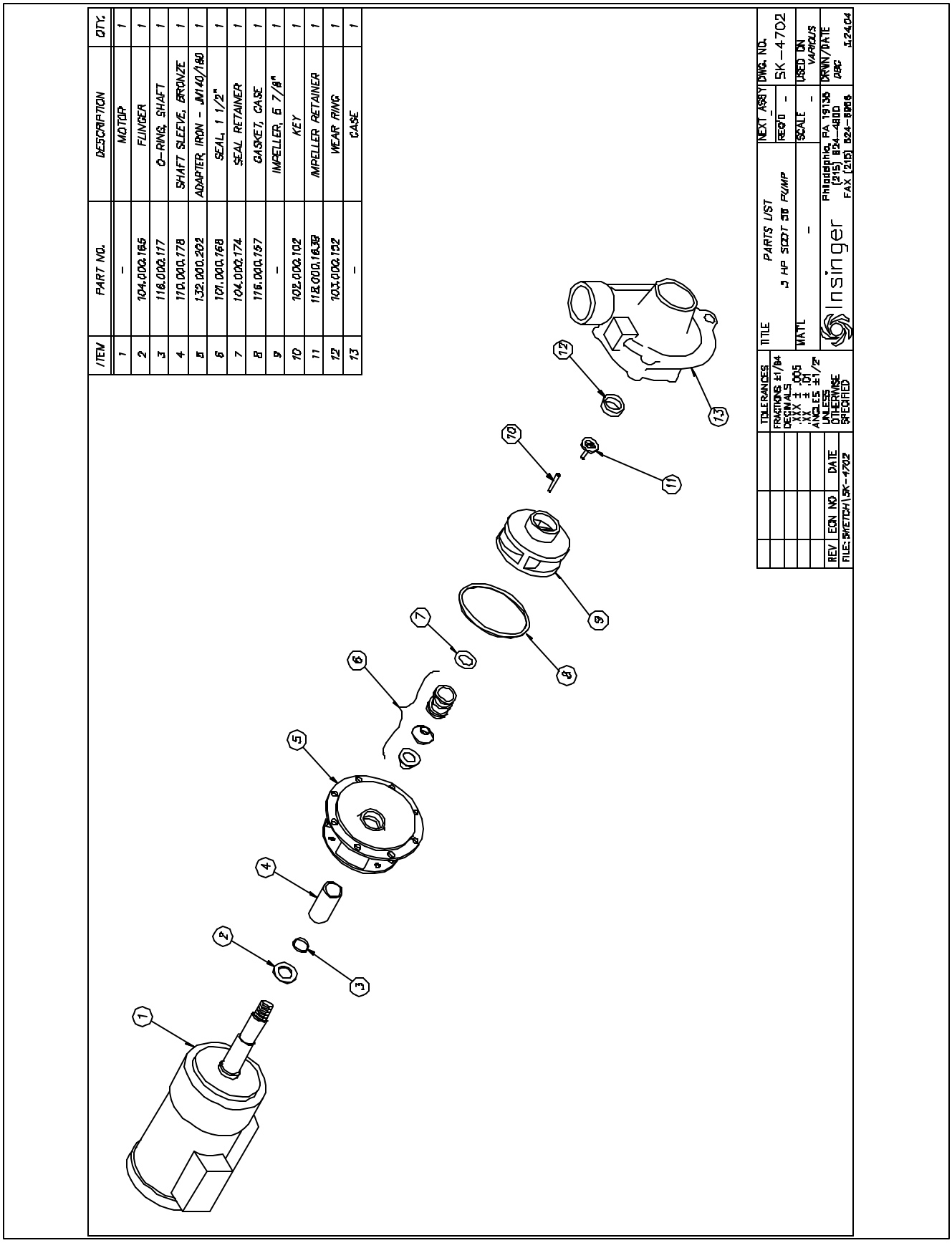
			TOLERANCES	TITLE	NEXT ASSY	DWG. NO.
			FRACTIONS ±1/64 DECIMALS .XXX ± .005 .XX ± .01 ANGLES ±1/2° UNLESS OTHERWISE SPECIFIED	SUCTION LINE ASSEMBLY	REQ'D 1	1104-69
				MAT'L NOTED	SCALE 1=8	USED ON MASTER
REV	ECN NO	DATE		Insinger Machine Company Philadelphia, PA 19135 (215) 624-4800 FAX (215) 624-6965		DRWN/DATE PHILIP 10.7.87
FILE: PARTS\1104-69						



ITEM	PART NO.	DESCRIPTION	QTY.
1	UP-1	PUMP BODY	1
2	D-435	ADAPTER	1
3	NOTED	IMPELLER	1
4	SUP-3	END COVER PLATE	1
5	D3-805	PUMP SHAFT	1
6	D3-818	MOUNTING BRACKET	1
7			
8	UP-8	END COVER GASKET	1
9	UP-9	HOUSING COVER GASKET	1
10	UP-13	FLINGER	1
11	UP-15	CERAMIC SEAL	1
12	D3096-JC-64	END COVER BOLT	12
13			
14	D302-1	KEY	1
15	D3-824A	WASHER	1
16	D3736-J2	LOCKWASHER	1
17	D3096-JC-5A	IMPELLER BOLT	1
18	D313A-J1	WASHER	12
19			
20	D3086-GC-2H	SET SCREW	2

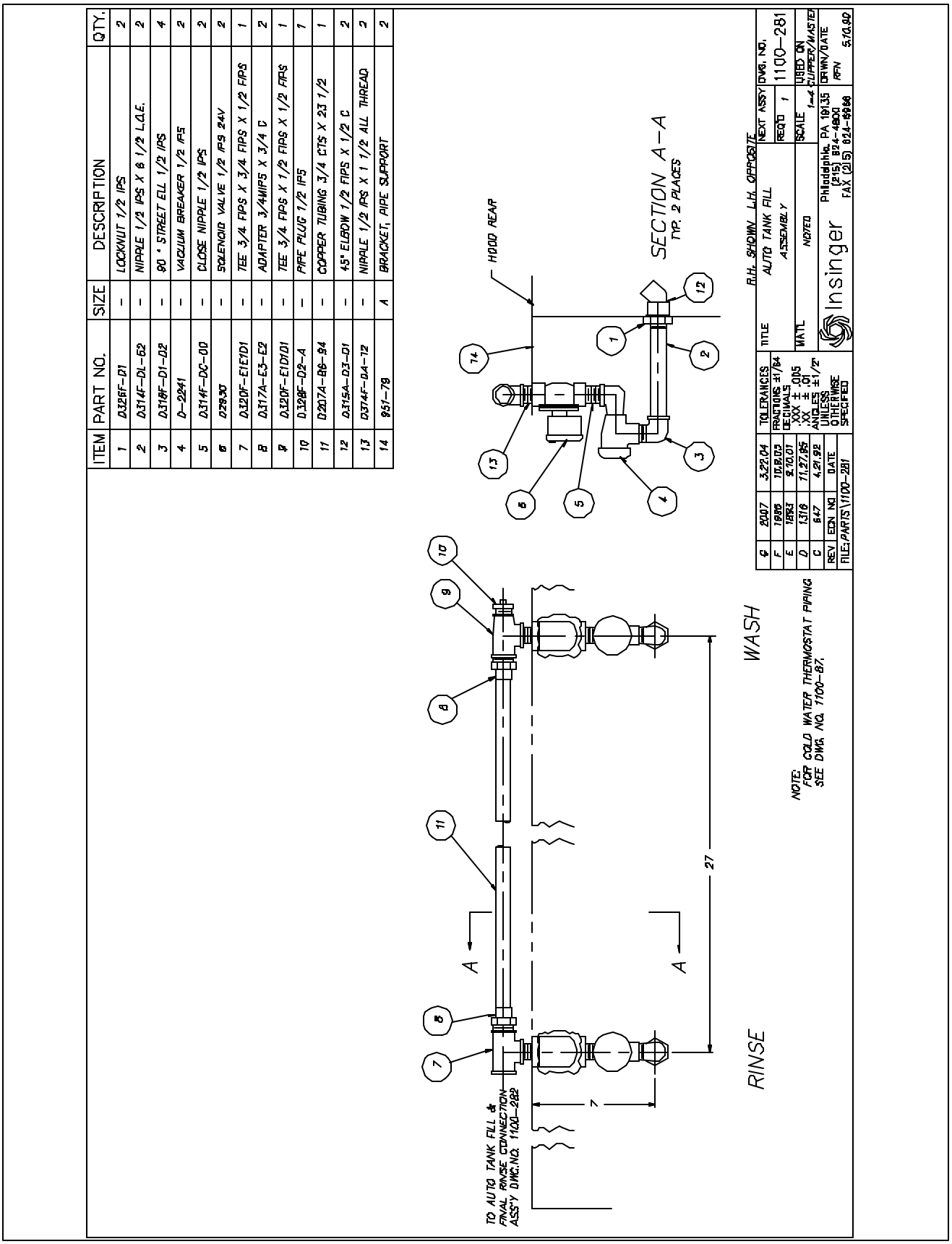
NOTE:
FOR COMPLETE ASSEMBLY USE PART NO. D2471A
IMPELLER PART NO. & SIZE:
SUP-2A 4 1/2" (MODULAR, SPEEDER, SUPER W & R)
SUP-9A 5" (ADMIRAL WASH, CLIPPER/MASTER/CENTURY PW)

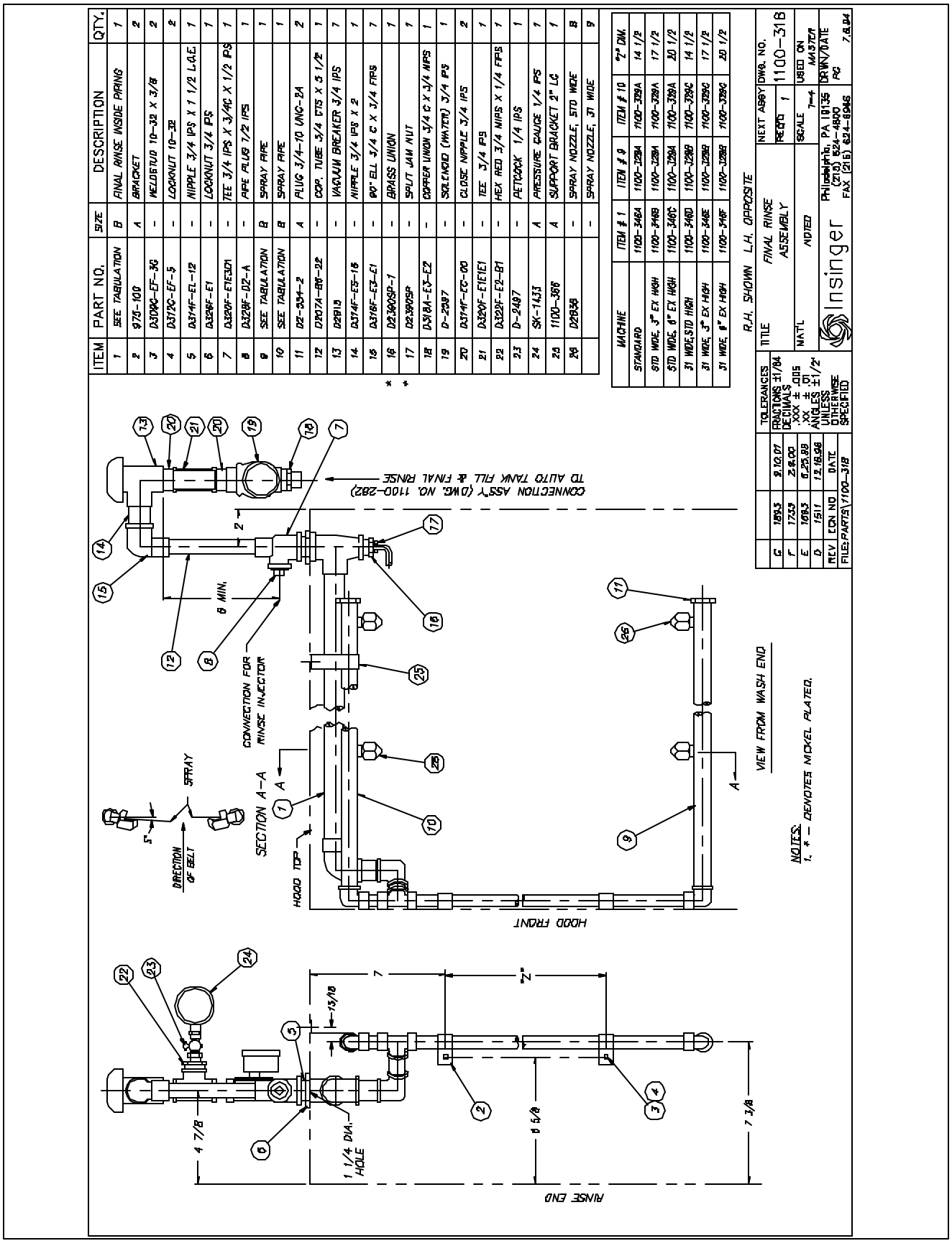
| | | |

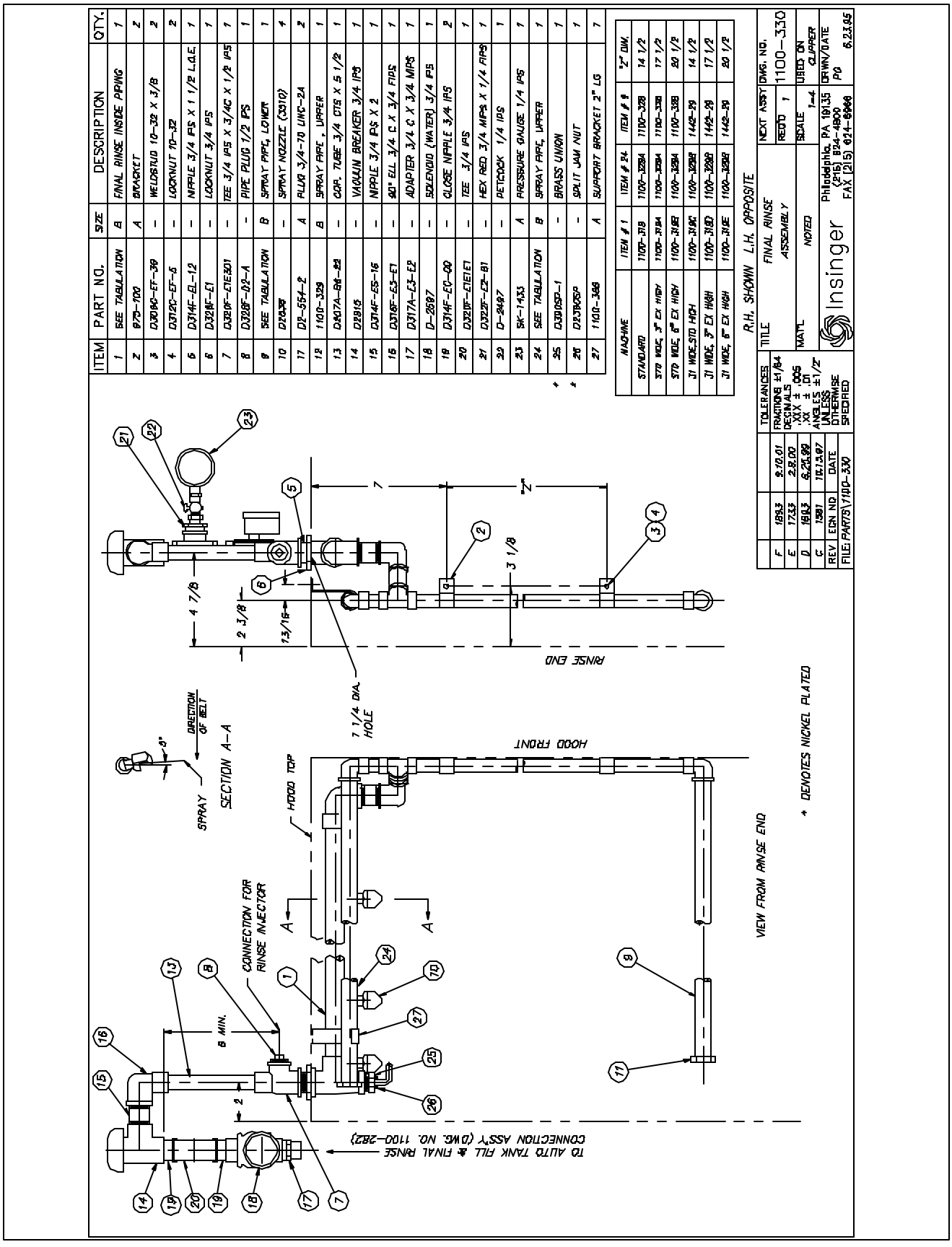


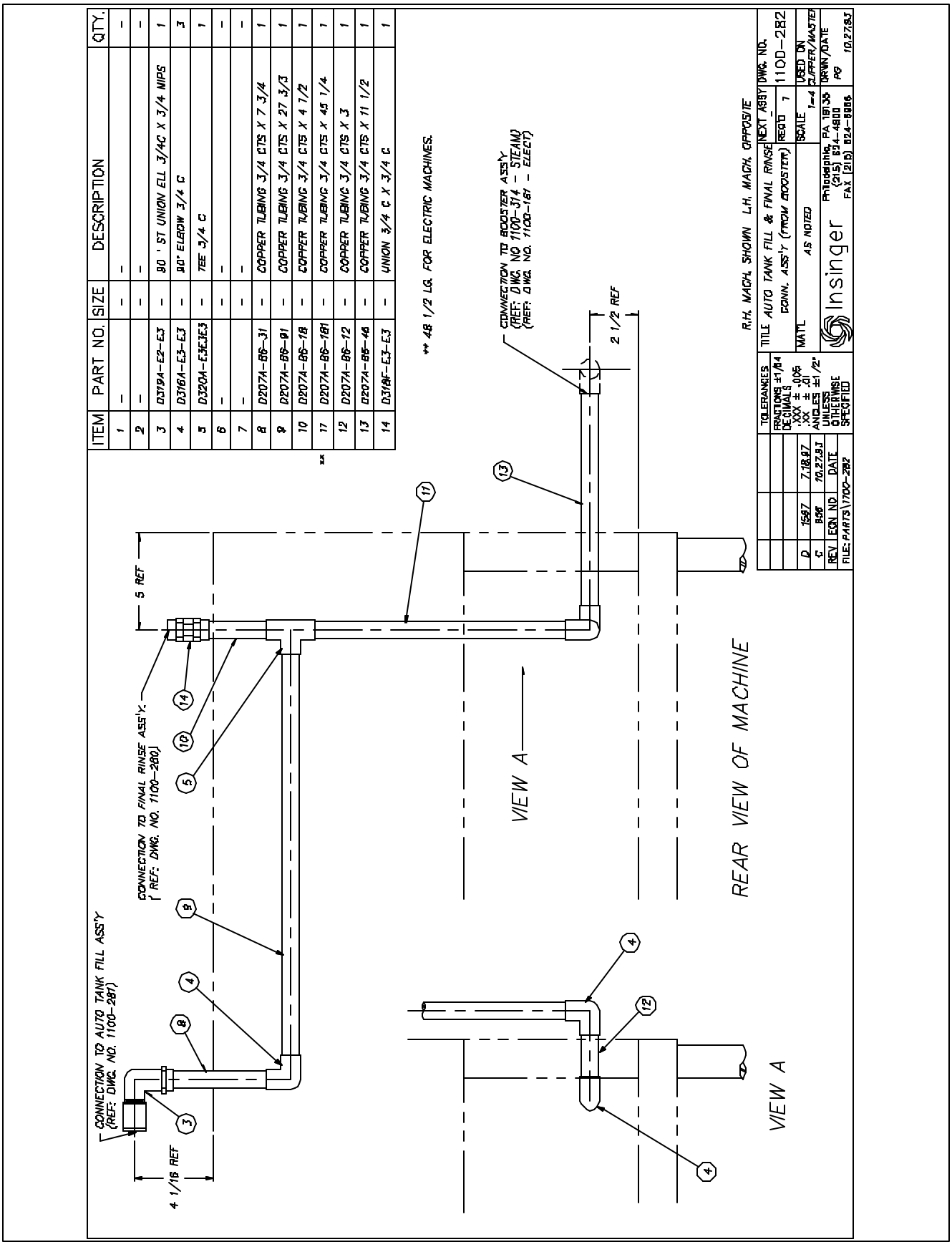
ITEM	PART NO.	DESCRIPTION	QTY.
1	–	MOTOR	1
2	104.000.165	FLINGER	1
3	118.000.117	O-RING, SHAFT	1
4	170.000.178	SHAFT SLEEVE, BRONZE	1
5	132.000.202	ADAPTER, IRON - JM140/160	1
6	121.000.168	SEAL, 1 1/2"	1
7	104.000.174	SEAL RETAINER	1
8	116.000.157	GASKET, CASE	1
9	–	IMPELLER, 6 7/8"	1
10	102.000.102	KEY	1
11	118.000.1638	IMPELLER RETAINER	1
12	103.000.152	WEAR RING	1
13	–	CASE	1

TOLERANCES	TITLE	NEXT ASSY	DWG. NO.
FRACTIONS ±1/64	PARTS LIST	_	
DECIMALS	5 HP SCOT SB PUMP	REQ'D -	SK-4702
.XX ± .005			
.XXX ± .001	MATL -	SCALE -	USED ON VARIOUS
ANGLES ±1/2°			
UNLESS OTHERWISE SPECIFIED	Insinger Philadelphia, PA 19136 (215) 824-4800 FAX (215) 824-5866		DRWN/DATE DBC 4.24.04
REV ECN NO DATE			
FILE: SKETCH\SK-4702			

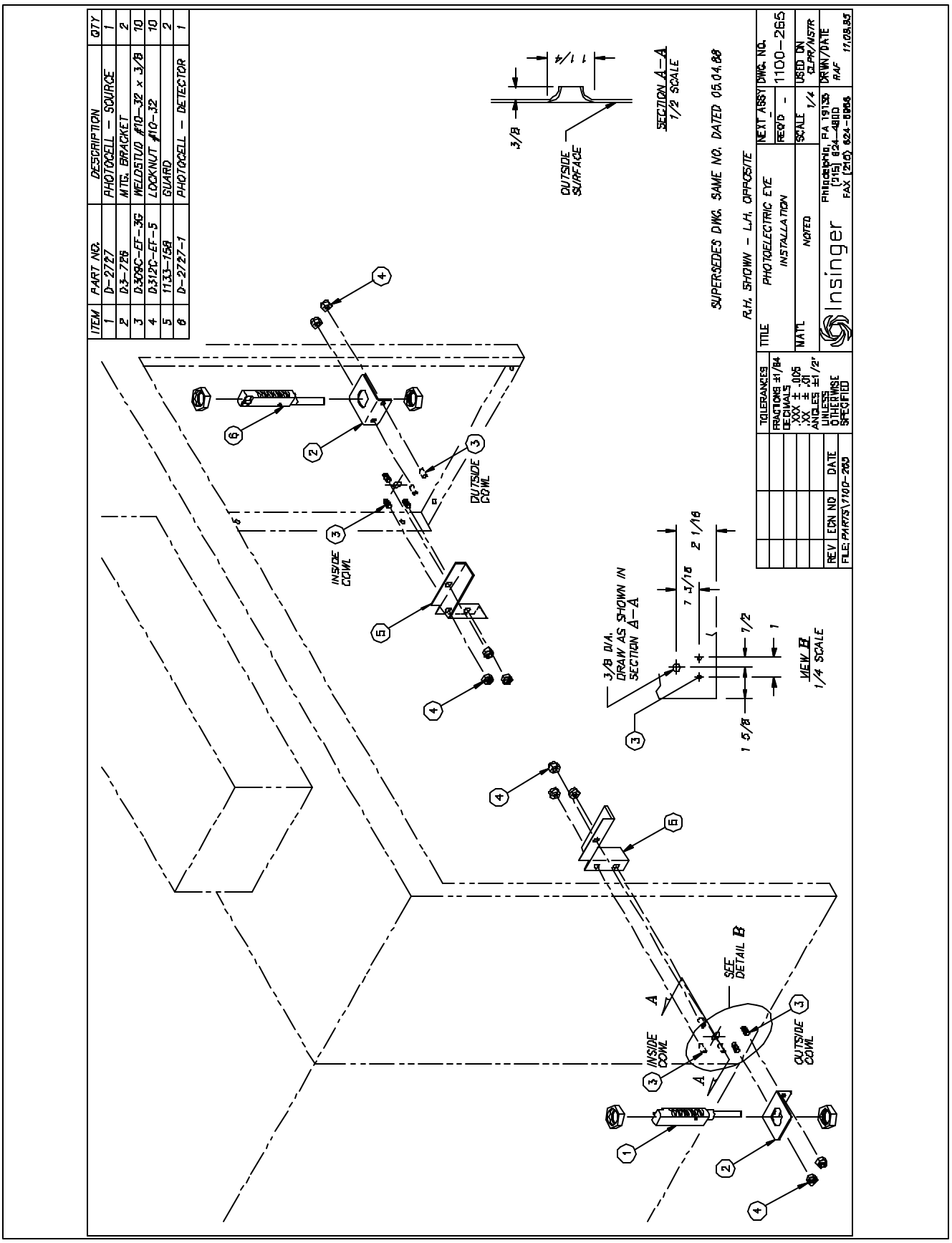

ITEM | PART NO. | SIZE | DESCRIPTION | QTY.
1 | 0.1326F-01 | – | LOCKNUT 1/2 IPS | 2
2 | 0.1314F-01-62 | – | NIPPLE 1/2 IPS X 6 1/2 L.O.E. | 2
3 | 0.1316F-01-02 | – | 90 ° STREET ELL 1/2 IPS | 4
4 | 0-2241 | – | VACUUM BREAKER 1/2 IPS | 2
5 | 0.1314F-DC-00 | – | CLOSE NIPPLE 1/2 IPS | 2
6 | 029430 | – | SOLENOID VALVE 1/2 IPS 24V | 2
7 | 0.1210F-E1E1D1 | – | TEE 3/4 FIPS X 3/4 FIPS X 1/2 FIPS | 1
8 | 0.1117A-E3-C2 | – | ADAPTER 3/4MIPS X 3/4 C | 2
9 | 0.1210F-E1D1D1 | – | TEE 3/4 FIPS X 1/2 FIPS X 1/2 FIPS | 1
10 | 0.1208F-02-A | – | PIPE PLUG 1/2 IPS | 1
11 | D20174-B6-84 | – | COPPER TUBING 3/4 CTS X 23 1/2 | 1
12 | 0.1154A-03-01 | – | 45° ELBOW 1/2 FIPS X 1/2 C | 2
13 | 0.1374F-04-12 | – | NIPPLE 1/2 IPS X 1 1/2 ALL THREAD | 2
14 | 951-79 | A | BRACKET, PIPE SUPPORT | 2
R.H. SHOWN, L.H. OPPOSITE
TITLE
AUTO TANK FILL ASSEMBLY
MATL
NOTED
NEXT ASSY
REQ'D 1
SCALE 1=4
DWG. NO. 1100-281
USED ON CLIPPER/MASTER
DRAWN/DATE RFN 5.10.99
Insinger
Philadelphia, PA 19135
(215) 824-4800
FAX (215) 824-8966
TOLERANCES
FRACTIONS ±1/64
DECIMALS
.XXX ± .005
.XX ± .01
ANGLES ±1/2°
UNLESS OTHERWISE SPECIFIED
REV | ECN NO | DATE
FILE: PARTS\1100-281
C | 2007 | 3.22.04
F | 1985 | 10.8.03
E | 1893 | 8.10.01
D | 1316 | 11.27.95
C | 647 | 4.21.92
HOOD REAR
SECTION A-A
TYP. 2 PLACES
WASH
RINSE
A
A
27
7
TO AUTO TANK FILL & FINAL RINSE CONNECTION ASS'Y DWG. NO. 1100-282
NOTE:
FOR COLD WATER THERMOSTAT PIPING SEE DWG. NO. 1100-87.

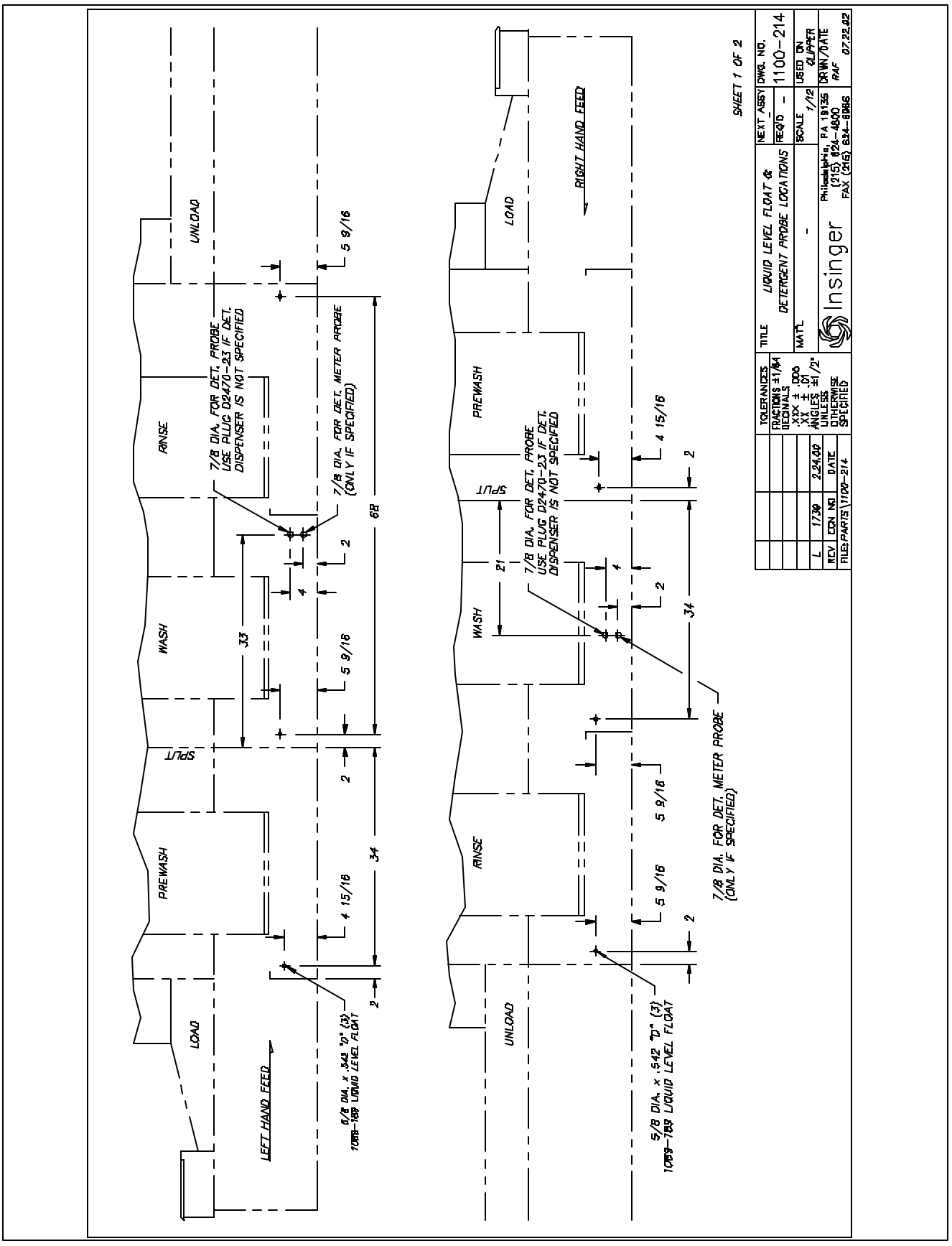

ITEM | PART NO. | SIZE | DESCRIPTION | QTY.
1 | SEE TABULATION | B | FINAL RINSE INSIDE PIPING | 1
2 | 970-100 | A | BRACKET | 2
3 | D3004G-EF-3G | - | WELDSTUD 10-32 X 3/8 | 2
4 | D3729G-EF-5 | - | LOCKNUT 10-32 | 2
5 | D3744F-EL-12 | - | NIPPLE 3/4 IPS X 1 1/2 LG.E. | 1
6 | D3268F-E1 | - | LOCKNUT 3/4 IPS | 1
7 | D3260F-E1E3GN | - | TEE 3/4 IPS X 3/4C X 1/2 IPS | 1
8 | D3208F-D2-A | - | PIPE PLUG 1/2 IPS | 1
9 | SEE TABULATION | B | SPRAY PIPE | 1
10 | SEE TABULATION | B | SPRAY PIPE | 1
11 | D2-354-2 | A | PLUG 3/4-10 UNC-2A | 2
12 | D2107A-E6-22 | - | COPP. TUBE 5/8 OTS X 5 1/2 | 1
13 | D2291B | - | VACUUM BREAKER 3/4 IPS | 1
14 | D3744F-E5-16 | - | NIPPLE 3/4 IPS X 2 | 1
15 | D3768F-E3-E1 | - | 90° ELL 3/4 C X 3/4 FFPS | 1
16 | D2360SP-1 | - | BRASS UNION | 1
17 | D2390SP | - | SPLIT JAM NUT | 1
18 | D3181A-E3-E2 | - | COPPER UNION 3/4 C X 3/4 MIPS | 1
19 | D-2397 | - | SOLENOID (WATER) 3/4 IPS | 1
20 | D3744F-EC-60 | - | CLOSE NIPPLE 3/4 IPS | 2
21 | D3202F-E1E1E1 | - | TEE 3/4 IPS | 1
22 | D3122F-E2-B1 | - | HEX RED 3/4 MIPS X 1/4 FFPS | 1
23 | D-2497 | - | PETCOCK 1/4 IPS | 1
24 | SK-1433 | A | PRESSURE GAUGE 1/4 IPS | 1
25 | 1100-366 | A | SUPPORT BRACKET 2" LG | 1
26 | D2636 | - | SPRAY NOZZLE, STD WIDE | 18
 | | - | SPRAY NOZZLE, 31 WIDE | 9
* *
MACHINE | ITEM # 1 | ITEM # 9 | ITEM # 10 | "Z" DIM.
STANDARD | 1100-3484 | 1100-3284 | 1100-328A | 14 1/2
STD WIDE, 3" EX HIGH | 1100-3488 | 1100-3284 | 1100-328A | 17 1/2
STD WIDE, 6" EX HIGH | 1100-348C | 1100-3284 | 1100-328A | 20 1/2
31 WIDE,STD HIGH | 1100-348D | 1100-3288 | 1100-328C | 14 1/2
31 WIDE, 3" EX HIGH | 1100-348E | 1100-3288 | 1100-328C | 17 1/2
31 WIDE, 6" EX HIGH | 1100-348F | 1100-3288 | 1100-328C | 20 1/2
R.H. SHOWN L.H. OPPOSITE
TITLE: FINAL RINSE ASSEMBLY
MAT'L: NOTED
Insinger Philadelphia, PA 19135 (215) 624-4800 FAX (215) 624-6946
NEXT ASSY: 1100-318
DWG. NO. 1100-318
REQ'D: 1
SCALE: 1=4
USED ON: MASTER
DRAWN/DATE: PC 7.8.04
TOLERANCES: FRACTIONS ±1/64, DECIMALS .XXX ± .005, .XX ± .01, ANGLES ±1/2°, UNLESS OTHERWISE SPECIFIED
REV | ECN NO | DATE
C | 1893 | 9.10.07
B | 1733 | 2.8.00
A | 1685 | 6.25.99
- | 1511 | 12.16.98
FILE: PARTS\1100-318
CONNECTION ASS'Y (DWG. NO. 1100-282) TO AUTO TANK FILL & FINAL RINSE
CONNECTION FOR RINSE INJECTOR
SECTION A-A
HOOD TOP
HOOD FRONT
VIEW FROM WASH END
SPRAY
DIRECTION OF BELT
5"
6 MIN.
Z
RINSE END
4 7/8
1 1/4 DIA. HOLE
15/16
7
"Z"
6 5/8
7 3/8
NOTES:
1. * - DENOTES NICKEL PLATED.

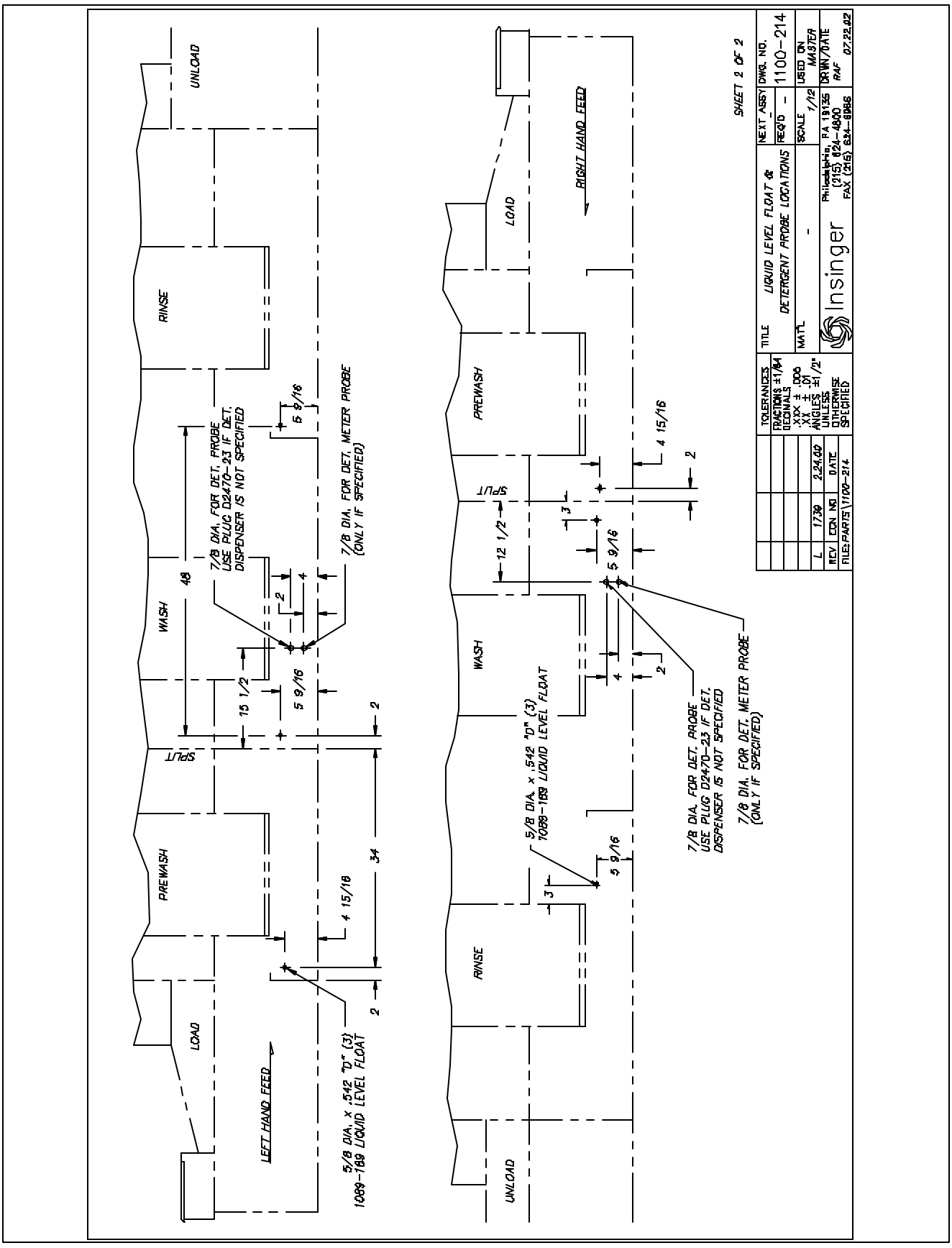

ITEM | PART NO. | SIZE | DESCRIPTION | QTY.
1 | SEE TABULATION | B | FINAL RINSE INSIDE PIPING | 1
2 | 675-1100 | A | BRACKET | 2
3 | DJ0180-EF-39 | – | WELDSTUD 10-32 X 3/8 | 2
4 | DJ126-EF-5 | – | LOCKNUT 10-32 | 2
5 | DJ14F-EL-12 | – | NIPPLE 3/4 IPS X 1 1/2 L.O.E. | 1
6 | DJ24F-E1 | – | LOCKNUT 3/4 IPS | 1
7 | DJ20F-E7E501 | – | TEE 3/4 IPS X 3/4C X 1/2 IPS | 1
8 | DJ20F-D2-A | – | PIPE PLUG 1/2 IPS | 1
9 | SEE TABULATION | B | SPRAY PIPE, LOWER | 1
10 | DJ03F | – | SPRAY NOZZLE (DJ10) | 4
11 | D2-554-2 | A | PLUG 3/4-10 UNC-2A | 2
12 | 1100-329 | B | SPRAY PIPE, UPPER | 1
13 | DJ07A-B8-22 | – | COPR. TUBE 3/4 CTS X 5 1/2 | 1
14 | D2815 | – | VACUUM BREAKER 3/4 IPS | 1
15 | DJ14F-E5-16 | – | NIPPLE 3/4 IPS X 2 | 1
16 | DJ16F-E5-E7 | – | 90° ELL 3/4 C X 3/4 FIPS | 1
17 | DJ17A-E3-E2 | – | ADAPTER 3/4 C X 3/4 MIPS | 1
18 | D-2587 | – | SOLENOID (WATER) 3/4 IPS | 1
19 | DJ14F-E0-00 | – | CLOSE NIPPLE 3/4 IPS | 2
20 | DJ20F-E7E1E1 | – | TEE 3/4 IPS | 1
21 | DJ22F-E2-B1 | – | HEX RED 3/4 MIPS X 1/4 FIPS | 1
22 | D-2487 | – | PETCOCK 1/4 IPS | 1
23 | SK-1433 | A | PRESSURE GAUGE 1/4 IPS | 1
24 | SEE TABULATION | B | SPRAY PIPE, UPPER | 1
25 | DJ0105P-1 | – | BRASS UNION | 1
26 | DJ13A05P | – | SPLIT JAM NUT | 1
27 | 1100-348 | A | SUPPORT BRACKET 2" LG | 1
* *
MACHINE | ITEM # 11 | ITEM # 24 | ITEM # 9 | "Z" DIM.
STANDARD | 1100-318 | 1100-328A | 1100-328 | 14 1/2
STD WIDE, 3" EX HIGH | 1100-318A | 1100-328A | 1100-328 | 17 1/2
STD WIDE, 6" EX HIGH | 1100-318B | 1100-328A | 1100-328 | 20 1/2
31" WIDE,STD HIGH | 1100-318C | 1100-328AC | 1442-28 | 14 1/2
31" WIDE, 3" EX HIGH | 1100-318D | 1100-328AD | 1442-28 | 17 1/2
31" WIDE, 6" EX HIGH | 1100-318E | 1100-328AE | 1442-28 | 20 1/2
R.H. SHOWN L.H. OPPOSITE
TITLE FINAL RINSE ASSEMBLY
MATL NOTED
SCALE 1=4
NEXT ASSY
REQ'D 1
DWG. NO. 1100-330
USED ON CLIPPER
DRWN/DATE PG 6.23.05
TOLERANCES
FRACTIONS ±1/64
DECIMALS .XX ± .005 .XX ± .01
ANGLES ±1/2°
UNLESS OTHERWISE SPECIFIED
REV | ECN NO | DATE
F 1893 8.10.01
E 1743 2.8.00
D 1643 6.24.99
C 1591 12.13.97
FILE: PARTS\1100-330
Insinger
Philadelphia, PA 19135
(215) 824-4800
FAX (215) 624-8660
* DENOTES NICKEL PLATED
RINSE END
7
Z
4 7/8
2 3/8
13/16
3 1/8
7 1/4 DIA. HOLE
DIRECTION OF BELT
SPRAY
SECTION A-A
HOOD FRONT
HOOD TOP
CONNECTION FOR RINSE INJECTOR
8 MIN.
2
TO AUTO TANK FILL & FINAL RINSE CONNECTION ASS'Y (DWG. NO. 1100-282)
VIEW FROM RINSE END


REAR VIEW OF MACHINE
VIEW A
VIEW A
R.H. MACH. SHOWN L.H. MACH. OPPOSITE
** 48 1/2 LG. FOR ELECTRIC MACHINES.
CONNECTION TO BOOSTER ASS'Y (REF: DWG. NO 1100-374 - STEAM) (REF: DWG. NO. 1100-167 - ELECT)
CONNECTION TO FINAL RINSE ASS'Y. (REF: DWG. NO. 1100-280)
CONNECTION TO AUTO TANK FILL ASS'Y (REF: DWG. NO. 1100-281)
5 REF
2 1/2 REF
4 1/16 REF
TITLE AUTO TANK FILL & FINAL RINSE CONN. ASS'Y (FROM BOOSTER)
NEXT ASSY 7
REQ'D 7
DWG. NO. 1100-282
MATL AS NOTED
SCALE 1=4
USED ON CLIPPER/MASTER
DRWN/DATE PG 10.27.95
TOLERANCES FRACTIONS ±1/64 DECIMALS .XXX ± .005 .XX ± .01 ANGLES ±1/2°
UNLESS OTHERWISE SPECIFIED
Insinger
Philadelphia, PA 19136 (215) 624-4800 FAX (215) 624-8886
D 1597 7.18.97 PG
C BSK 10.27.95 PG
REV ECN NO. DATE
FILE: PARTS\1700-282

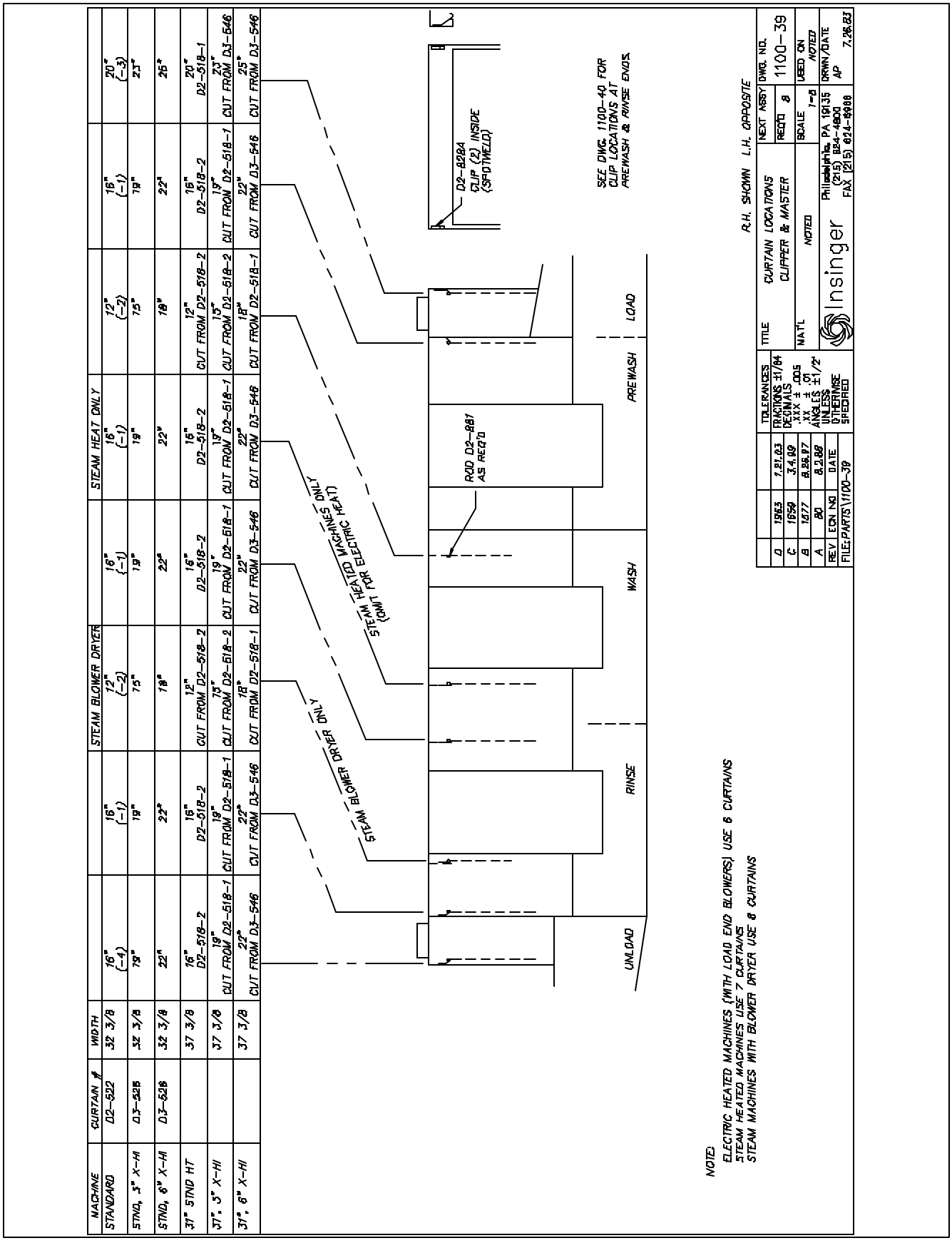
ITEM	PART NO.	SIZE	DESCRIPTION	QTY.
1	–	–	–	–
2	–	–	–	–
3	D379A-E2-E3	–	90 ' ST UNION ELL 3/4C X 3/4 NIPS	1
4	D316A-E3-E3	–	90° ELBOW 3/4 C	3
5	D320A-E3E3E3	–	TEE 3/4 C	1
6	–	–	–	–
7	–	–	–	–
8	D207A-B6-31	–	COPPER TUBING 3/4 CTS X 7 3/4	1
9	D207A-B6-91	–	COPPER TUBING 3/4 CTS X 27 3/3	1
10	D207A-B6-18	–	COPPER TUBING 3/4 CTS X 4 1/2	1
11	D207A-B6-181	–	COPPER TUBING 3/4 CTS X 45 1/4	1
12	D207A-B6-12	–	COPPER TUBING 3/4 CTS X 3	1
13	D207A-B6-46	–	COPPER TUBING 3/4 CTS X 11 1/2	1
14	D316F-E3-E3	–	UNION 3/4 C X 3/4 C	1

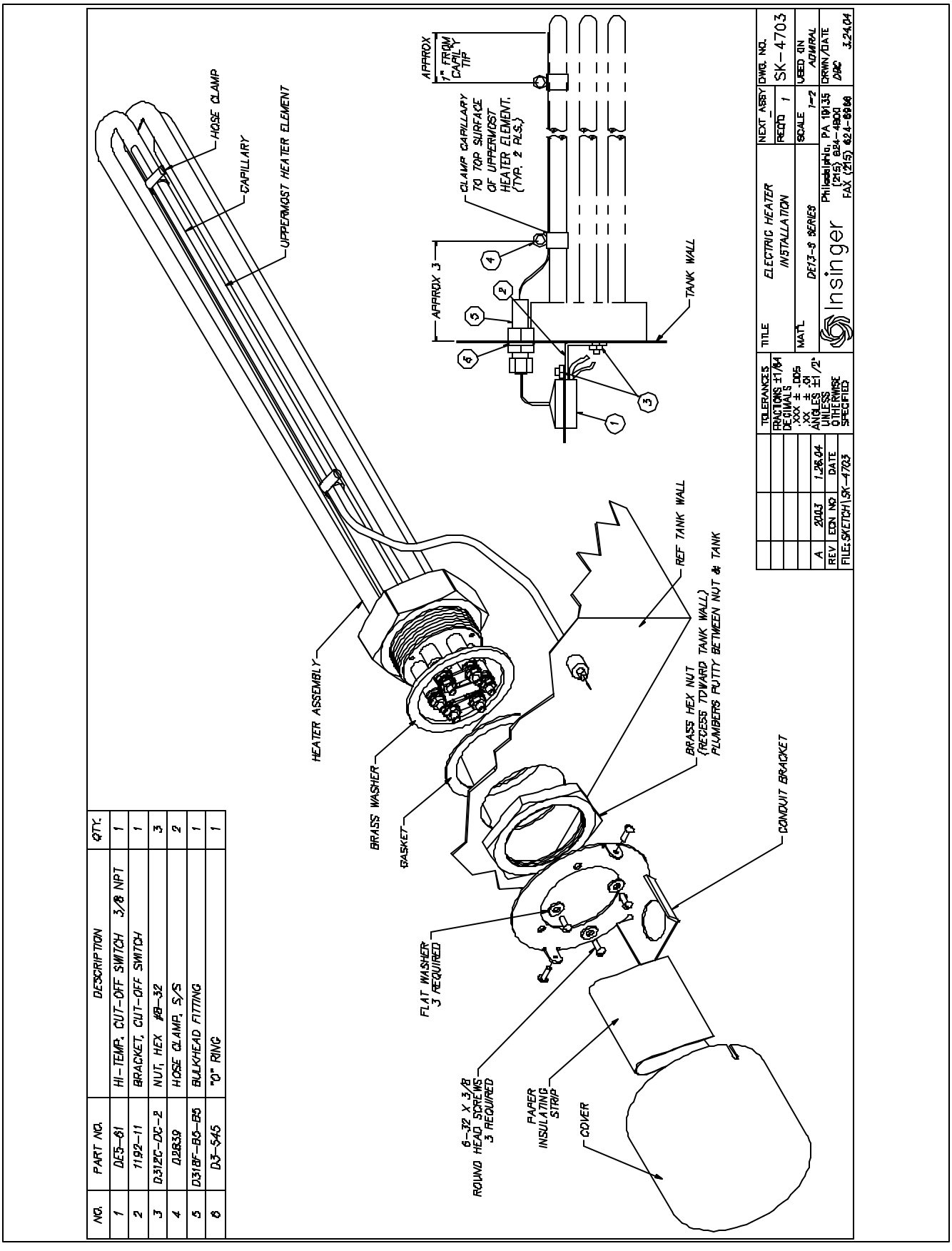

ITEM | PART NO. | DESCRIPTION | QTY
1 | D-2727 | PHOTOCELL – SOURCE | 1
2 | D3-726 | MTG. BRACKET | 2
3 | D3096C-EF-3G | WELDSTUD #10-32 x 3/8 | 10
4 | D3121C-EF-5 | LOCKNUT #10-32 | 10
5 | 1133-758 | GUARD | 2
6 | D-2727-1 | PHOTOCELL – DETECTOR | 1
SUPERSEDES DWG. SAME NO. DATED 05.04.88
R.H. SHOWN – L.H. OPPOSITE
TITLE PHOTOELECTRIC EYE INSTALLATION
NEXT ASSY
DWG. NO. 1100-265
REQ'D -
SCALE 1/4
USED ON CLPR/MSTR
DRWN/DATE RAF 11.08.85
MATL NOTED
Insinger
Philadelphia, PA 19135
(215) 624-4810
FAX (216) 624-8964
TOLERANCES
FRACTIONS ±1/64
DECIMALS .XXX ± .005 .XX ± .01
ANGLES ±1/2°
UNLESS OTHERWISE SPECIFIED
REV. ECN NO. DATE
FILE: PARTS\1100-265
SECTION A–A 1/2 SCALE
3/8
1 1/4
OUTSIDE SURFACE
3/8 DIA. DRAW AS SHOWN IN SECTION A–A
2 1/16
1 5/16
1/2
1
1 5/8
VIEW B 1/4 SCALE
SEE DETAIL B
INSIDE COWL
OUTSIDE COWL


UNLOAD
RINSE
WASH
SPLIT
PREWASH
LOAD
LEFT HAND FEED
7/8 DIA. FOR DET. PROBE USE PLUG D2470-23 IF DET. DISPENSER IS NOT SPECIFIED
7/8 DIA. FOR DET. METER PROBE (ONLY IF SPECIFIED)
5/8 DIA. x .542 "D" (3) 1089-188 LIQUID LEVEL FLOAT
5 9/16
4 15/16
33
34
68
4
2
RIGHT HAND FEED
21
7/8 DIA. FOR DET. METER PROBE (ONLY IF SPECIFIED)
5/8 DIA. x .542 "D" (3) 1089-188 LIQUID LEVEL FLOAT
SHEET 1 OF 2
TOLERANCES
FRACTIONS ±1/64
DECIMALS
.XXX ± .005
.XX ± .01
ANGLES ±1/2°
UNLESS
OTHERWISE
SPECIFIED
TITLE
LIQUID LEVEL FLOAT & DETERGENT PROBE LOCATIONS
MATL
-
NEXT ASSY
REQ'D -
SCALE 1/12
USED ON
CLIPPER
DWG. NO.
1100-214
DRAWN
RAF
DATE
07.22.02
Insinger
Philadelphia, PA 19135
(215) 624-4800
FAX (215) 624-8886
REV
ECN NO
DATE
FILE: PARTS \ 1100-214
1739
2.24.04

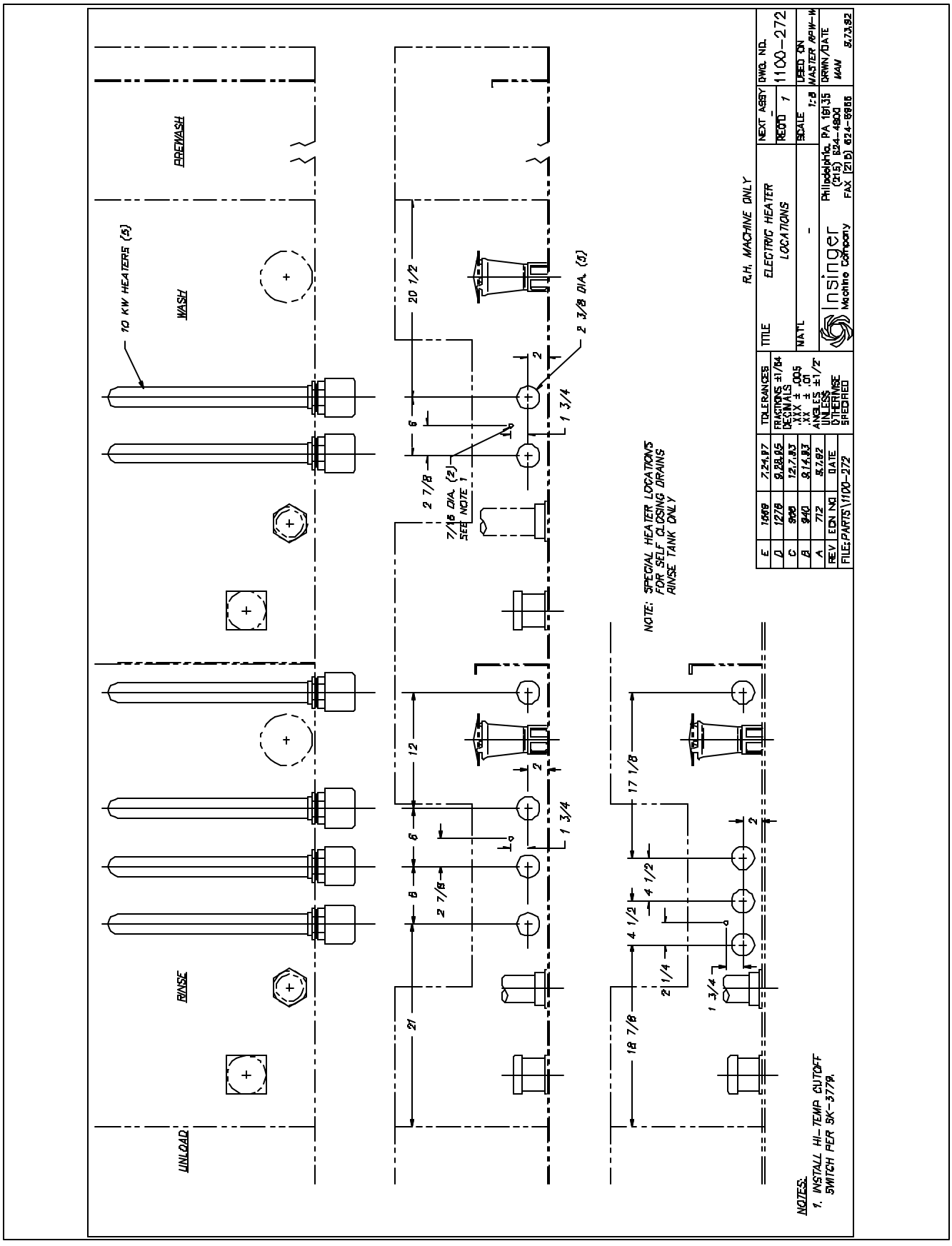

UNLOAD
RINSE
WASH
PREWASH
SPLIT
LOAD
LEFT HAND FEED
RIGHT HAND FEED
7/8 DIA. FOR DET. PROBE USE PLUG D2470-23 IF DET. DISPENSER IS NOT SPECIFIED
7/8 DIA. FOR DET. METER PROBE (ONLY IF SPECIFIED)
5/8 DIA. x .542 "D" (3) 1089-169 LIQUID LEVEL FLOAT
15 1/2
5 9/16
4 15/16
34
12 1/2
LIQUID LEVEL FLOAT & DETERGENT PROBE LOCATIONS
Insinger
1100-214
07.23.02

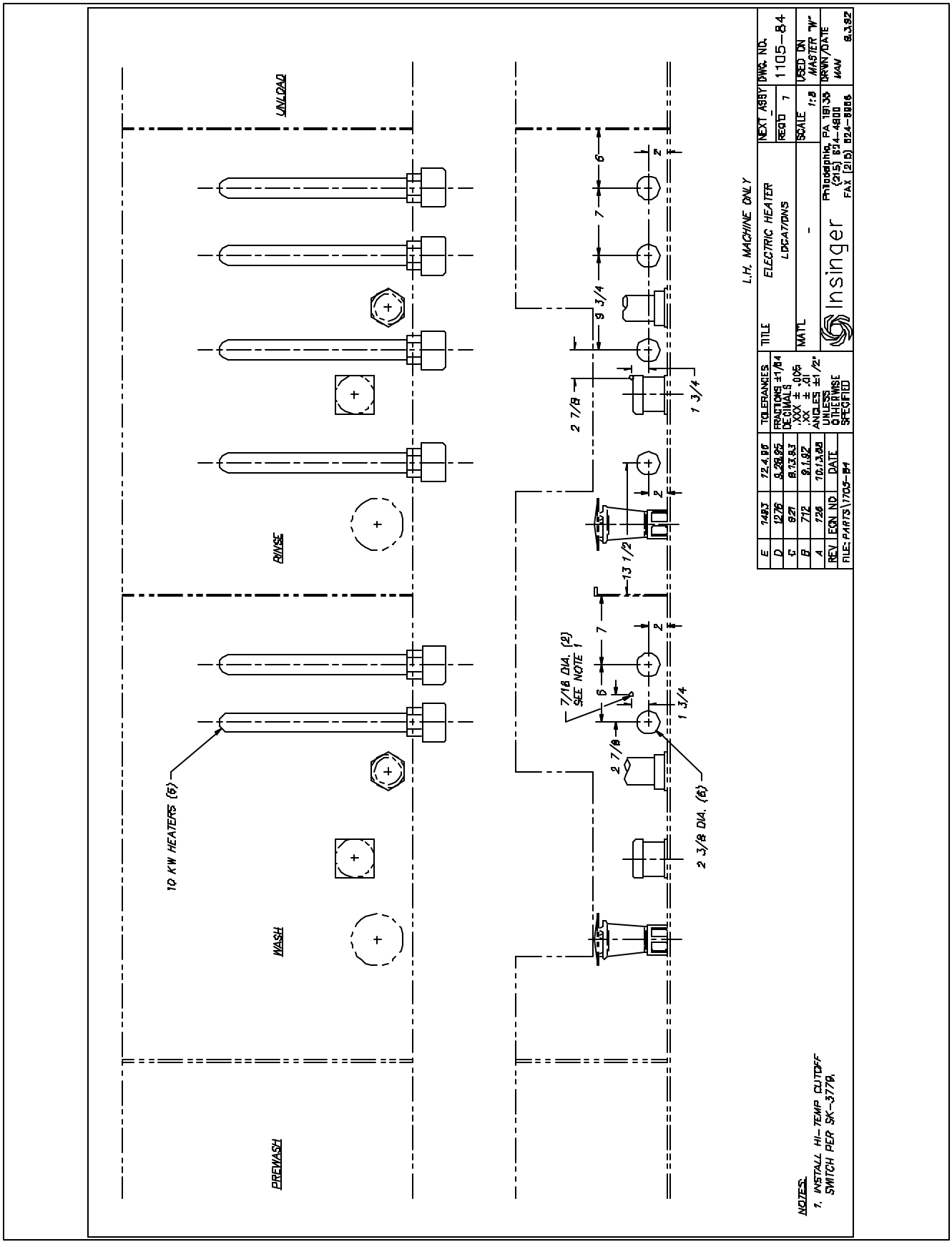
MACHINE	CURTAIN #	WIDTH			STEAM BLOWER DRYER			STEAM HEAT ONLY		
STANDARD	D2-522	32 3/8	76" (-4)	16" (-1)	12" (-2)	16" (-1)	16" D2-518-2	12" (-2)	16" (-1)	20" (-3)
STND, 5" X-HI	D3-525	32 3/8	79"	19"	15"	19"	19" CUT FROM D2-518-1	15" CUT FROM D2-518-2	19"	23"
STND, 6" X-HI	D3-526	32 3/8	82"	22"	18"	22"	22" CUT FROM D3-546	18" CUT FROM D2-518-1	22" CUT FROM D3-546	26"
37" STND HT		37 3/8	76" D2-518-2	16" D2-518-2	12" CUT FROM D2-518-2	16" D2-518-2	16" D2-518-2	12" CUT FROM D2-518-2	16" D2-518-2	20" D2-518-1
37", 5" X-HI		37 3/8	79" CUT FROM D2-518-1	19" CUT FROM D2-518-1	15" CUT FROM D2-518-2	19" CUT FROM D2-518-1	19" CUT FROM D2-518-1	15" CUT FROM D2-518-2	19" CUT FROM D2-518-1	23" CUT FROM D3-546
37", 6" X-HI		37 3/8	82" CUT FROM D3-546	22" CUT FROM D3-546	18" CUT FROM D2-518-1	22" CUT FROM D3-546	22" CUT FROM D3-546	18" CUT FROM D2-518-1	22" CUT FROM D3-546	25" CUT FROM D3-546



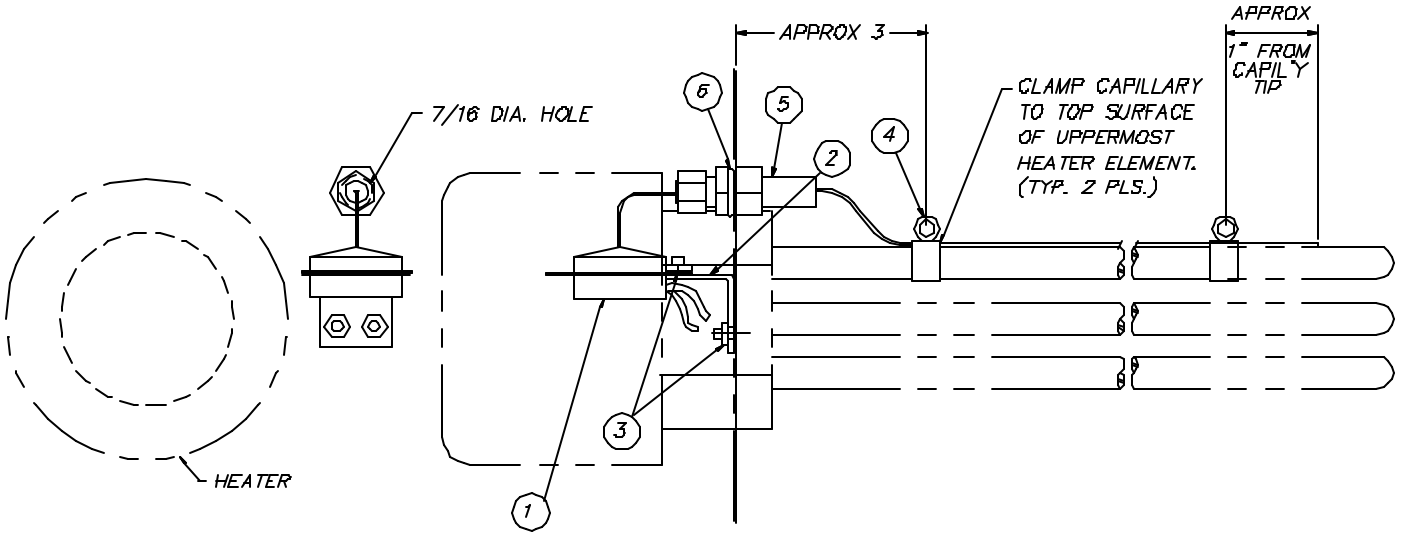


NO.	PART NO.	DESCRIPTION	QTY.
1	DE5-61	HI-TEMP. CUT-OFF SWITCH 3/8 NPT	1
2	1192-11	BRACKET, CUT-OFF SWITCH	1
3	0.312C-DC-2	NUT, HEX #8-32	3
4	02839	HOSE CLAMP, S/S	2
5	0.318F-BS-B5	BULKHEAD FITTING	1
6	DJ-545	"O" RING	1


PREWASH
WASH
RINSE
UNLOAD
10 KW HEATERS (5)
20 1/2
2 3/8 DIA. (5)
2 7/8
7/16 DIA. (2)
SEE NOTE 1
1 3/4
12
6
8
21
17 1/8
4 1/2
2 1/4
18 7/8
NOTE: SPECIAL HEATER LOCATIONS FOR SELF CLOSING DRAINS RINSE TANK ONLY
R.H. MACHINE ONLY
NOTES:
1. INSTALL HI-TEMP CUTOFF SWITCH PER SK-3779.
TITLE
ELECTRIC HEATER LOCATIONS
NEXT ASSY
DWG. NO.
1100-272
REQ'D 1
SCALE 1:8
DRAWN/DATE MAW 8.13.92
Insinger Machine Company
Philadelphia, PA 19135
(215) 624-4800
FAX (215) 624-6885
TOLERANCES
FRACTIONS ±1/64
DECIMALS .XX ± .01
.XXX ± .005
ANGLES ±1/2°
DIMENSIONS SPECIFIED
REV
ECN NO.
DATE
FILE: PARTS\1100-272


UNLOAD
RINSE
WASH
PREWASH
10 KW HEATERS (6)
7/18 DIA. (2) SEE NOTE 1
2 3/8 DIA. (6)
9 3/4
7
6
2
2 7/8
1 3/4
13 1/2
8
L.H. MACHINE ONLY
NOTES:
1. INSTALL HI-TEMP CUTOFF SWITCH PER SK-3779.
TITLE
ELECTRIC HEATER LOCATIONS
MATL
SCALE 1:8
NEXT ASSY
REQD 7
DWG. NO. 1105-84
USED ON MASTER "W"
DRWN/DATE MAW 6.3.92
Insinger
Philadelphia, PA 19135
(215) 624-4800
FAX (215) 624-8806
TOLERANCES
FRACTIONS ±1/64
DECIMALS
.XXX ± .005
.XX ± .01
ANGLES ±1/2°
UNLESS OTHERWISE SPECIFIED
REV ECN NO DATE
FILE: PARTS\1705-84

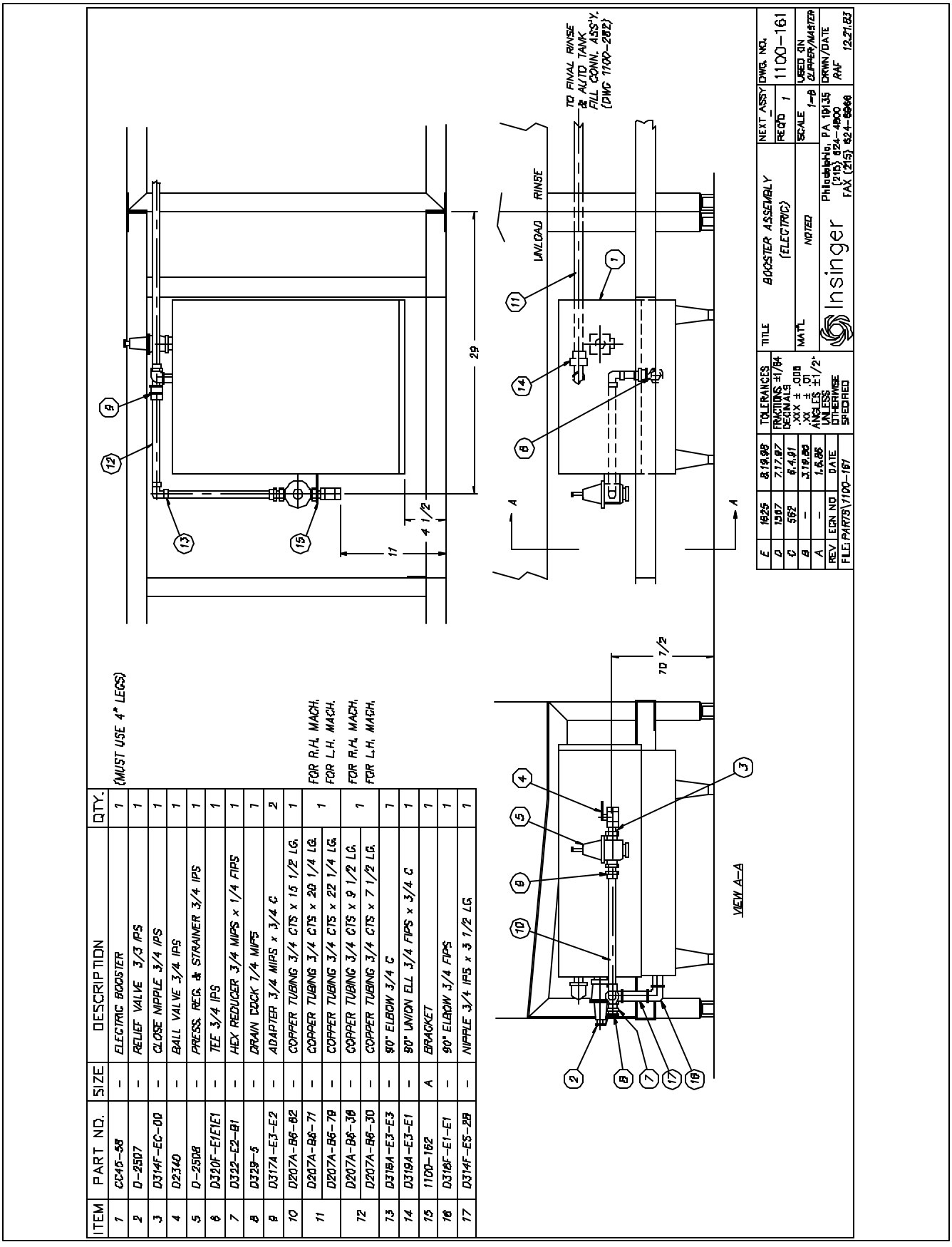
NO.	PART NO.	DESCRIPTION	QTY.
1	DE5-61	HI-TEMP. CUT-OFF SWITCH 3/8 NPT	1
2	1192-11	BRACKET, CUT-OFF SWITCH	1
3	D312C-DC-Z	NUT, HEX #8-32	3
4	D2839	HOSE CLAMP, S/S	2
5	D318F-B5-B5	BULKHEAD FITTING	1
6	D3-545	"O" RING	1



NOTE: ARRANGEMENT SHOWN IS TYPICAL; HOWEVER, IN SOME MODELS (e.g. MASTER L.H. RINSE TANK), ARRANGEMENT IS OPPOSITE.

			TOLERANCES
			FRACTIONS ±1/64
			DECIMALS .XXX ± .005 .XX ± .01
			ANGLES ±1/2°
A	1764	6.1.00	UNLESS OTHERWISE SPECIFIED
REV	ECN NO	DATE	
FILE: SKETCHA\SK-3779			

TITLE: HI-TEMP CUTOFF SWITCH INSTALLATION	NEXT ASSY: –	DWG. NO. SK-3779
	REQ'D: 1	
MAT'L: –	SCALE: 1:2	USED ON: FLITE
Insinger Philadelphia, PA 19135 (215) 624-4800 FAX (215) 624-6966		DRWN/DATE: MAM 9.27.95



ITEM	PART NO.	SIZE	DESCRIPTION	QTY.	
1	CC45-55	–	ELECTRIC BOOSTER	1	(MUST USE 4" LEGS)
2	D-2507	–	RELIEF VALVE 3/3 IPS	1	
3	D3114F-EC-00	–	CLOSE NIPPLE 3/4 IPS	1	
4	D2340	–	BALL VALVE 3/4 IPS	1	
5	D-2508	–	PRESS. REG. & STRAINER 3/4 IPS	1	
6	D3120F-E1E1E1	–	TEE 3/4 IPS	1	
7	D322-E2-B1	–	HEX REDUCER 3/4 MIPS x 1/4 FIPS	1	
8	D329-5	–	DRAIN COCK 1/4 MIPS	1	
9	D317A-E3-E2	–	ADAPTER 3/4 MIPS x 3/4 C	2	
10	D207A-B6-B2	–	COPPER TUBING 3/4 CTS x 15 1/2 LG.	1	
11	D207A-B6-71	–	COPPER TUBING 3/4 CTS x 20 1/4 LG.	1	FOR R.H. MACH. FOR L.H. MACH.
	D207A-B6-79	–	COPPER TUBING 3/4 CTS x 22 1/4 LG.		
12	D207A-B6-36	–	COPPER TUBING 3/4 CTS x 9 1/2 LG.	1	FOR R.H. MACH. FOR L.H. MACH.
	D207A-B6-30	–	COPPER TUBING 3/4 CTS x 7 1/2 LG.		
13	D316A-E3-E3	–	90° ELBOW 3/4 C	1	
14	D319A-E3-E1	–	90° UNION ELL 3/4 FIPS x 3/4 C	1	
15	1100-162	A	BRACKET	1	
16	D316F-E1-E1	–	90° ELBOW 3/4 FIPS	1	
17	D3114F-ES-B9	–	NIPPLE 3/4 IPS x 3 1/2 LG.	1	

REV	ECN NO	DATE
E	1625	8.19.98
D	1367	7.17.97
C	562	6.4.91
B	–	3.19.89
A	–	1.5.86

FILE: PARTS\1100-167

TOLERANCES UNLESS OTHERWISE SPECIFIED: FRACTIONS ±1/64, DECIMALS .XXX ± .010, .XX ± .01, ANGLES ±1/2°

TITLE: BOOSTER ASSEMBLY (ELECTRIC)

MATL: NOTED

SCALE: 1=8

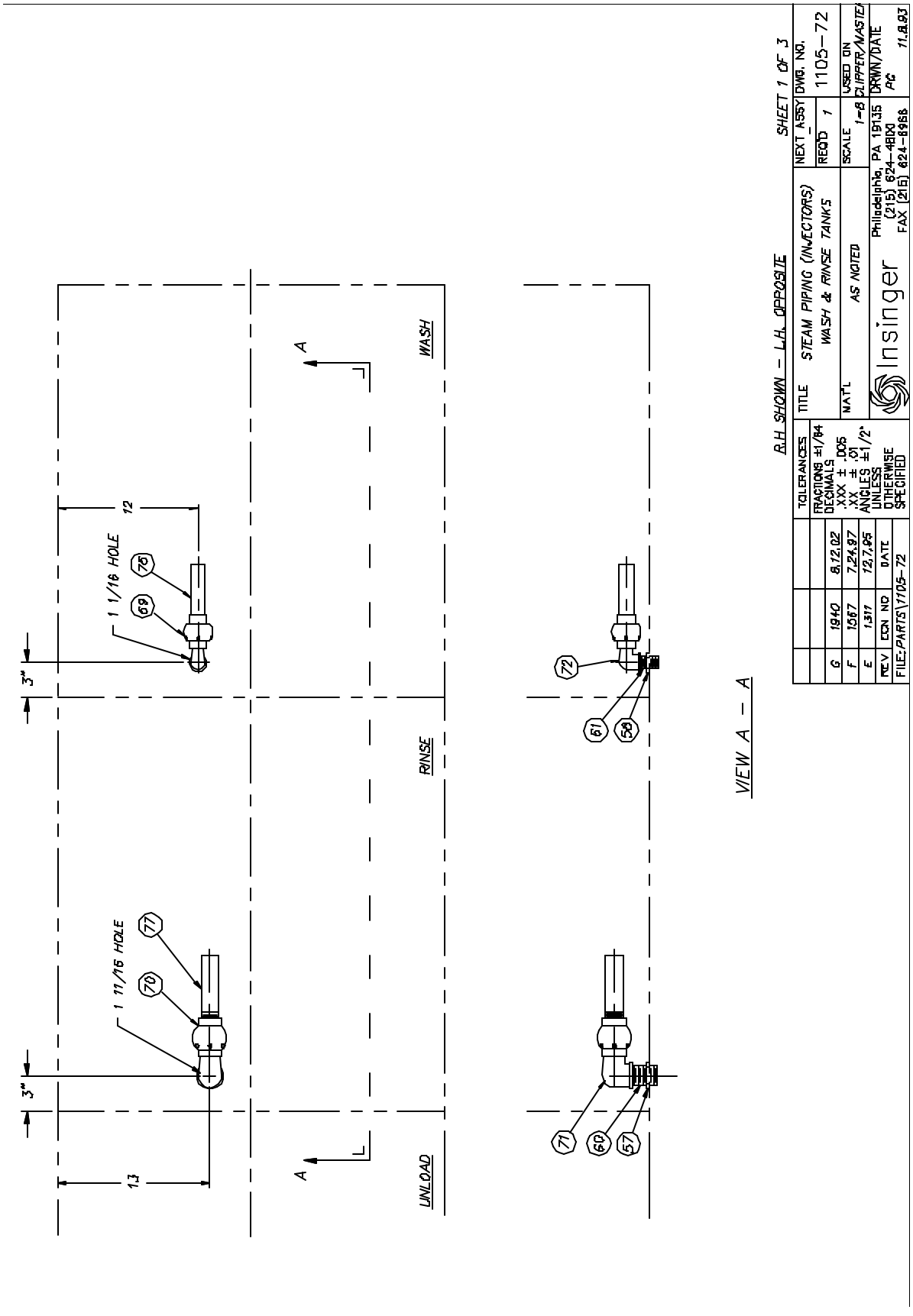
NEXT ASSY: REQ'D 1

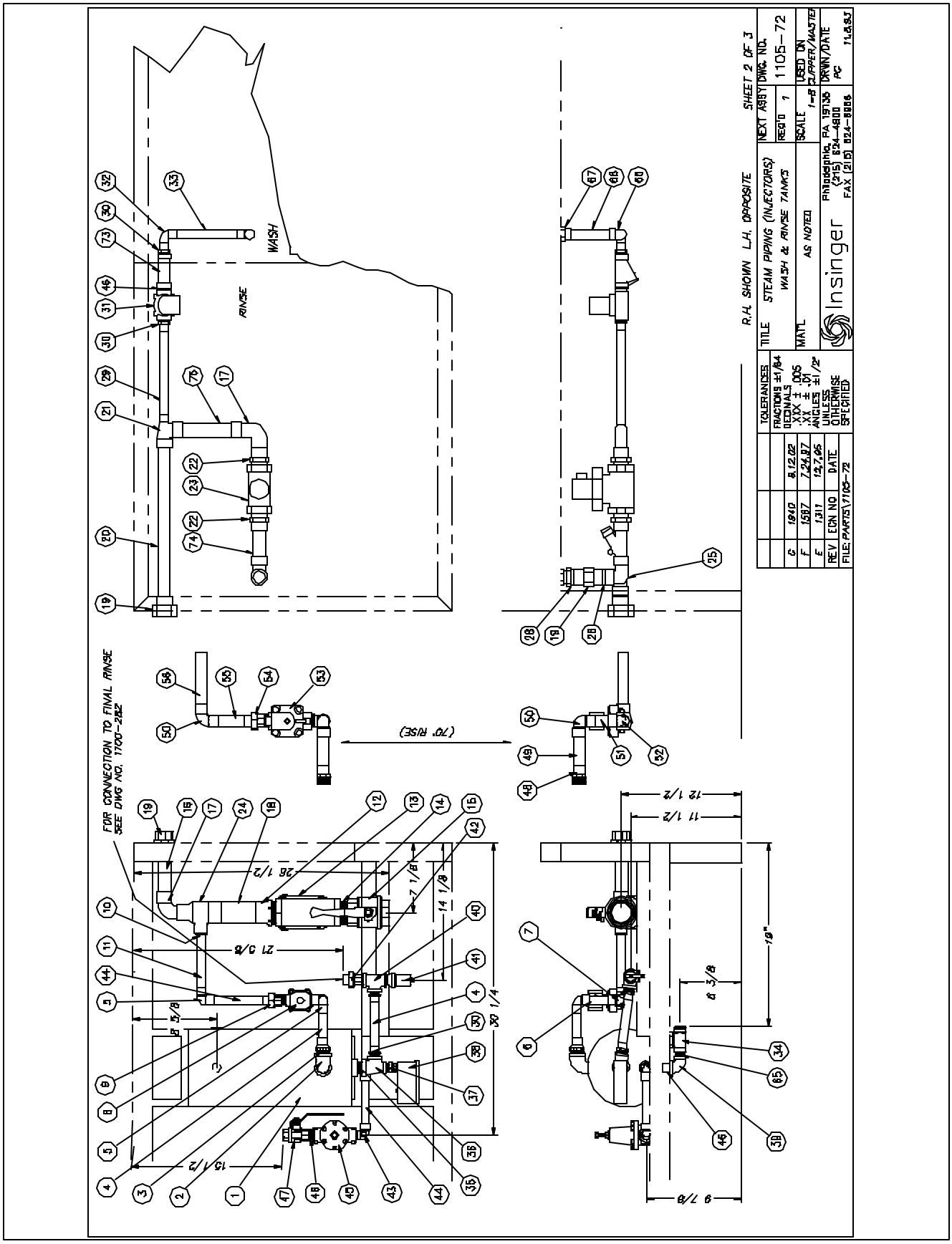
DWG. NO.: 1100-161

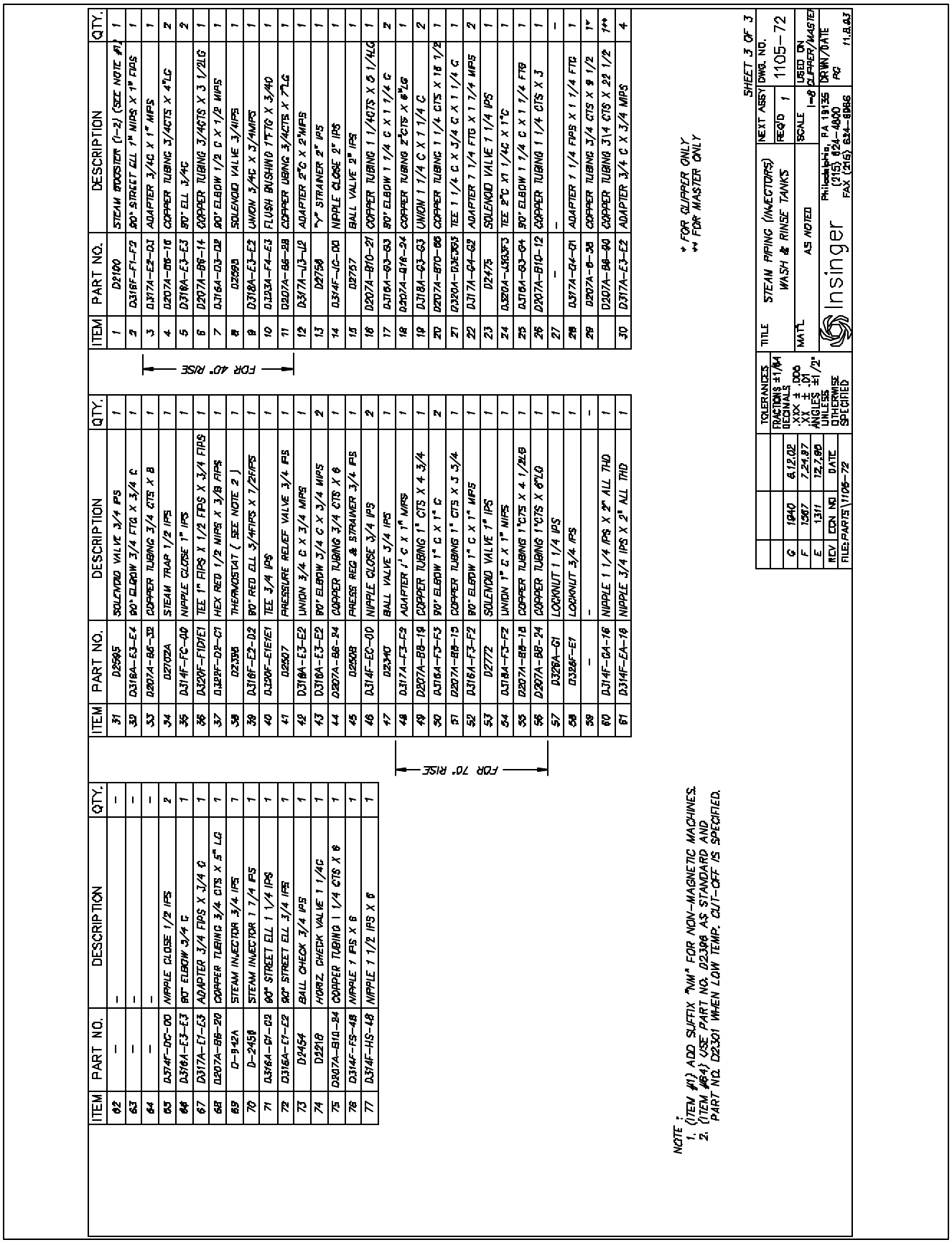
USED ON: CLIPPER/MASTER

DRWN/DATE: RAF 12.21.83

Insinger
Philadelphia, PA 19135
(215) 624-4800
FAX (215) 624-8660


R.H. SHOWN – L.H. OPPOSITE
SHEET 1 OF 3
STEAM PIPING (INJECTORS)
WASH & RINSE TANKS
AS NOTED
Insinger
Philadelphia, PA 19135
(215) 624-4810
FAX (215) 624-8968
1105-72
1-8
11.8.93
VIEW A – A
WASH
RINSE
UNLOAD
1 1/16 HOLE
12
13
3"
76
69
77
70
72
61
58
71
60
57


WASH
RINSE
R.H. SHOWN L.H. OPPOSITE
SHEET 2 OF 3
TITLE STEAM PIPING (INJECTORS) WASH & RINSE TANKS
NEXT ASSY
DWG. NO. 1105-72
REQ'D 1
SCALE 1-8
USED ON CLIPPER/MASTER
MATL AS NOTED
Insinger
Philadelphia, PA 19136
(215) 624-4800
FAX (215) 624-8806
DRWN/DATE PC 11.8.97
TOLERANCES
FRACTIONS ±1/64
DECIMALS .XX ± .005
.XXX ± .001
ANGLES ±1/2°
UNLESS OTHERWISE SPECIFIED
REV ECN NO DATE
C 1840 8.12.02
F 1587 7.24.07
E 1311 12.7.05
FILE: PARTS\1105-72
FOR CONNECTION TO FINAL RINSE SEE DWG NO. 1100-282
(TO RINSE)
26 1/2
21 3/8
15 1/8
13 1/2
7 1/8
14 1/8
30 1/4
12 1/2
11 1/2
19"
6 3/8
9 7/8



ITEM	PART NO.	DESCRIPTION	QTY.
62	—	—	—
63	—	—	—
64	—	—	—
65	D3147F-DC-CO	NIPPLE CLOSE 1/2 IPS	2
66	D3161A-E3-E3	90° ELBOW 3/4 C	1
67	D3117A-E1-E3	ADAPTER 3/4 FIPS X 3/4 C	1
68	D2072A-B6-20	COPPER TUBING 3/4 CTS X 5" LG	1
69	D-9142A	STEAM INJECTOR 3/4 IPS	1
70	D-2458	STEAM INJECTOR 1 1/4 IPS	1
71	D3164A-G1-G2	90° STREET ELL 1 1/4 IPS	1
72	D3116A-E1-E2	90° STREET ELL 3/4 IPS	1
73	D2454	BALL CHECK 3/4 IPS	1
74	D2216	HORIZ. CHECK VALVE 1 1/4C	1
75	D2072A-B10-24	COPPER TUBING 1 1/4 CTS X 6	1
76	D3144-FS-48	NIPPLE 1 IPS X 6	1
77	D3147-HS-48	NIPPLE 1 1/2 IPS X 6	1

FOR 70° RISE

ITEM	PART NO.	DESCRIPTION	QTY.
31	D2595	SOLENOID VALVE 3/4 IPS	1
32	D3116A-E3-E4	90° ELBOW 3/4 FTG X 3/4 C	1
33	D2072A-B6-32	COPPER TUBING 3/4 CTS X 8	1
34	D2702A	STEAM TRAP 1/2 IPS	1
35	D3114F-FC-40	NIPPLE CLOSE 1" IPS	1
36	D3201F-F1D1E1	TEE 1" FIPS X 1/2 FIPS X 3/4 FIPS	1
37	D3122F-D2-C1	HEX RED 1/2 MIPS X 3/8 FIPS	1
38	D2336	THERMOSTAT (SEE NOTE 2)	1
39	D3116F-E2-D2	90° RED ELL 3/4FIPS X 1/2FIPS	1
40	D3201F-E1E1E1	TEE 3/4 IPS	1
41	D2507	PRESSURE RELIEF VALVE 3/4 IPS	1
42	D3116A-E3-E2	UNION 3/4 C X 3/4 MIPS	1
43	D3116A-E3-E2	90° ELBOW 3/4 C X 3/4 MIPS	2
44	D2072A-B6-24	COPPER TUBING 3/4 CTS X 6	1
45	D2502	PRESS REG & STRAINER 3/4 IPS	1
46	D3114F-EC-10	NIPPLE CLOSE 3/4 IPS	2
47	D2340	BALL VALVE 3/4 IPS	1
48	D3117A-F3-F2	ADAPTER 1" C X 1" MIPS	1
49	D2072A-B8-18	COPPER TUBING 1" CTS X 4 3/4	1
50	D3116A-F3-F3	90° ELBOW 1" C X 1" C	2
51	D2072A-B8-15	COPPER TUBING 1" CTS X 3 3/4	1
52	D3116A-F3-F2	90° ELBOW 1" C X 1" MIPS	1
53	D2772	SOLENOID VALVE 1" IPS	1
54	D3184-F3-F2	UNION 1" C X 1" MIPS	1
55	D2072A-B8-18	COPPER TUBING 1"CTS X 4 1/2LG	1
56	D2072A-B8-24	COPPER TUBING 1"CTS X 6"LG	1
57	D3218A-G1	LOCKNUT 1 1/4 IPS	1
58	D3218F-E1	LOCKNUT 3/4 IPS	1
59	—	—	—
60	D3114F-G4-16	NIPPLE 1 1/4 IPS X 2" ALL THD	1
61	D3114F-EA-16	NIPPLE 3/4 IPS X 2" ALL THD	1

FOR 40° RISE

ITEM	PART NO.	DESCRIPTION	QTY.
1	D2100	STEAM BOOSTER (1-2) (SEE NOTE #1)	1
2	D3116F-F1-F2	90° STREET ELL 1" MIPS X 1" FIPS	1
3	D3117A-E2-D1	ADAPTER 3/4C X 1" MIPS	1
4	D2072A-B8-16	COPPER TUBING 3/4CTS X 4"LG	2
5	D3116A-E3-E3	90° ELL 3/4C	2
6	D2072A-B6-14	COPPER TUBING 3/4CTS X 3 1/2LG	1
7	D3164-D3-D2	90° ELBOW 1/2 C X 1/2 MIPS	1
8	D2595	SOLENOID VALVE 3/4IPS	1
9	D3118A-E3-E2	UNION 3/4C X 3/4MIPS	1
10	D1033A-F4-E3	FLUSH BUSHING 1"FTG X 3/4C	1
11	D2072A-B6-28	COPPER TUBING 3/4CTS X 7"LG	1
12	D3117A-J3-J2	ADAPTER 2"C X 2"MIPS	1
13	D2758	"Y" STRAINER 2" IPS	1
14	D3147F-JC-CO	NIPPLE CLOSE 2" IPS	1
15	D2757	BALL VALVE 2" IPS	1
16	D2072A-B10-27	COPPER TUBING 1 1/4CTS X 6 1/4LG	1
17	D3116A-E3-E3	90° ELBOW 1 1/4 C X 1 1/4 C	2
18	D2072A-B16-24	COPPER TUBING 2"CTS X 6"LG	1
19	D3118A-G3-G3	UNION 1 1/4 C X 1 1/4 C	2
20	D2072A-B10-68	COPPER TUBING 1 1/4 CTS X 16 1/2	1
21	D3201A-D3E3E3	TEE 1 1/4 C X 3/4 C X 1 1/4 C	1
22	D3117A-G4-G2	ADAPTER 1 1/4 FTG X 1 1/4 MIPS	2
23	D2475	SOLENOID VALVE 1 1/4 IPS	1
24	D3201A-L33F3	TEE 2"C X1 1/4C X 1"C	1
25	D3116A-G3-G4	90° ELBOW 1 1/4 C X 1 1/4 FTG	1
26	D2072A-B10-12	COPPER TUBING 1 1/4 CTS X 3	1
27	—	—	—
28	D3117A-G4-G1	ADAPTER 1 1/4 FIPS X 1 1/4 FTG	1
29	D2072A-B-36	COPPER TUBING 3/4 CTS X 9 1/2	1*
	D2072A-B8-80	COPPER TUBING 3/4 CTS X 22 1/2	1**
30	D3117A-E3-E2	ADAPTER 3/4 C X 3/4 MIPS	4

* FOR CLIPPER ONLY
** FOR MASTER ONLY

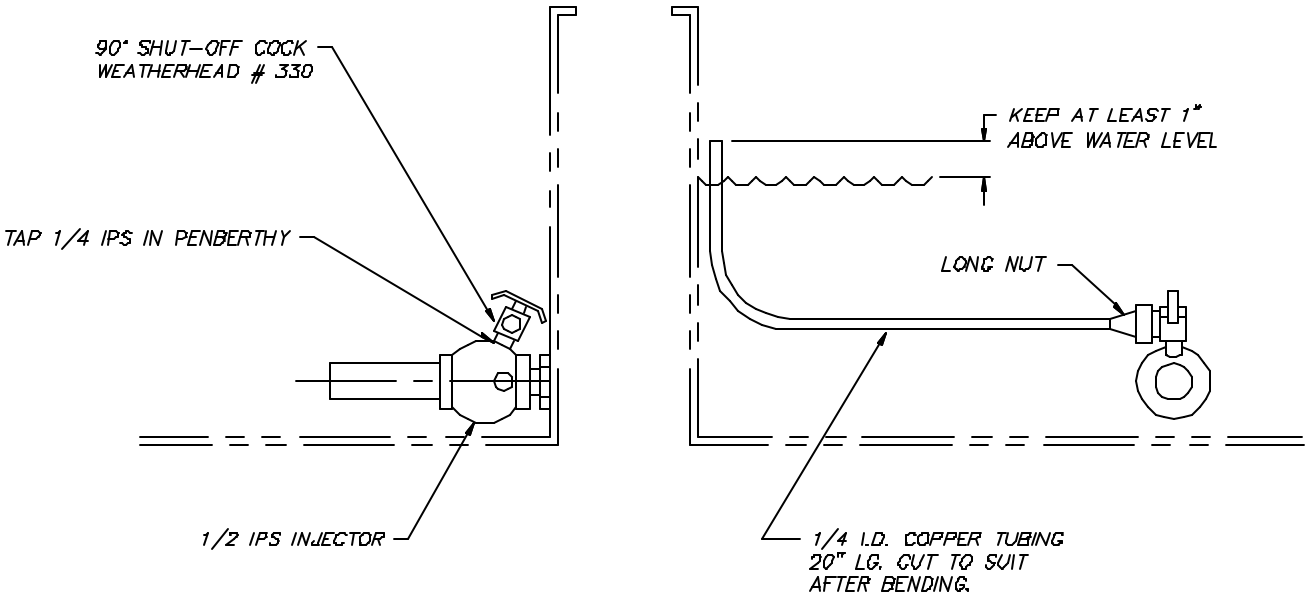
NOTE :
1. (ITEM #1) ADD SUFFIX "NM" FOR NON-MAGNETIC MACHINES.
2. (ITEM #64) USE PART NO. D2396 AS STANDARD AND PART NO. D2301 WHEN LOW TEMP. CUT-OFF IS SPECIFIED.

		TOLERANCES	
		FRACTIONS ±1/64	
		DECIMALS	
G	1940	6.12.02	XXX ± .005
F	1967	7.24.87	XX ± .01
E	1311	12.7.89	ANGLES ±1/2°
REV	ECN NO	DATE	UNLESS OTHERWISE SPECIFIED
FILE: PARTS\1105-72			

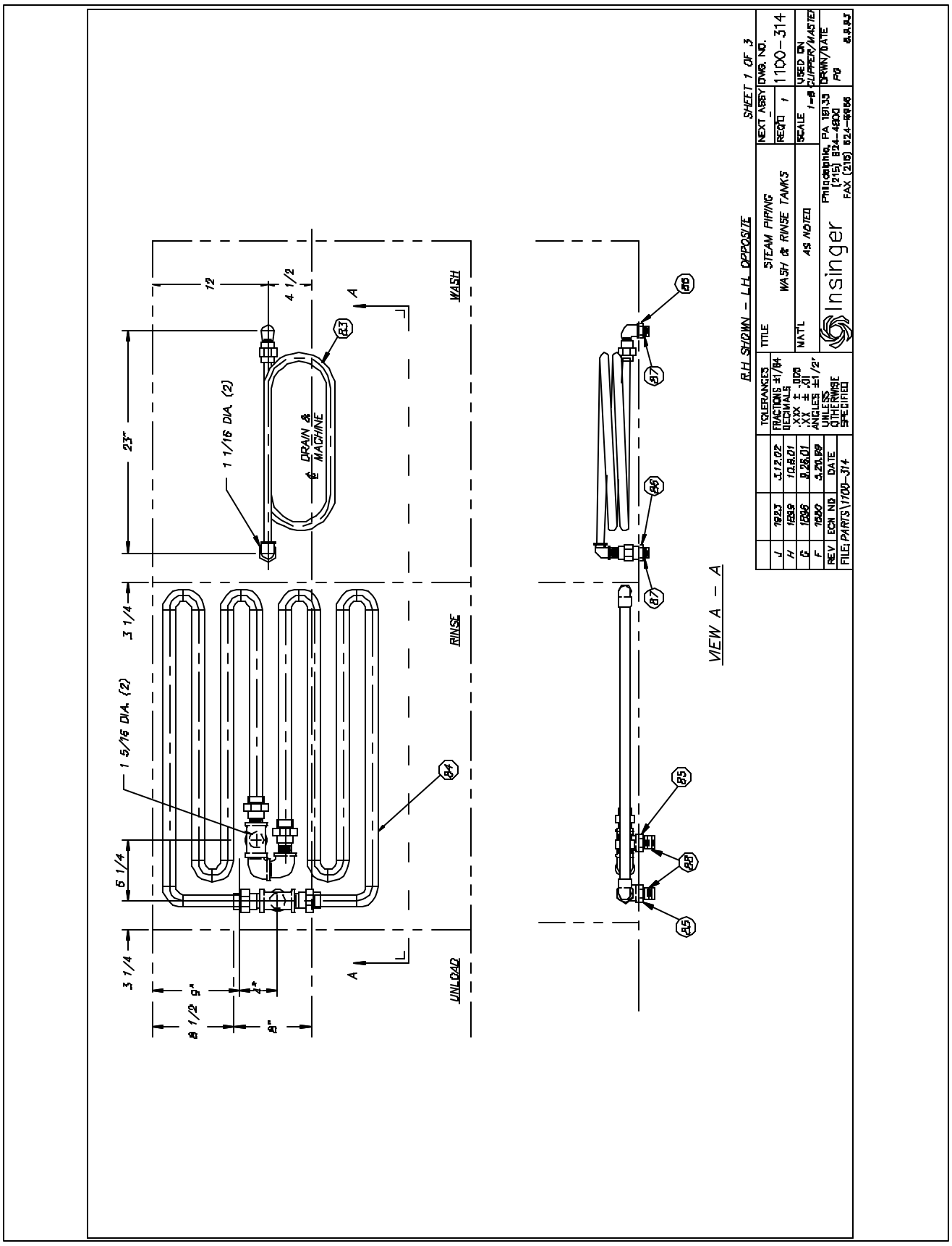
TITLE	STEAM PIPING (INJECTORS) WASH & RINSE TANKS
MATL	AS NOTED
Insinger	Philadelphia, PA 19135 (215) 624-4900 FAX (215) 624-6946

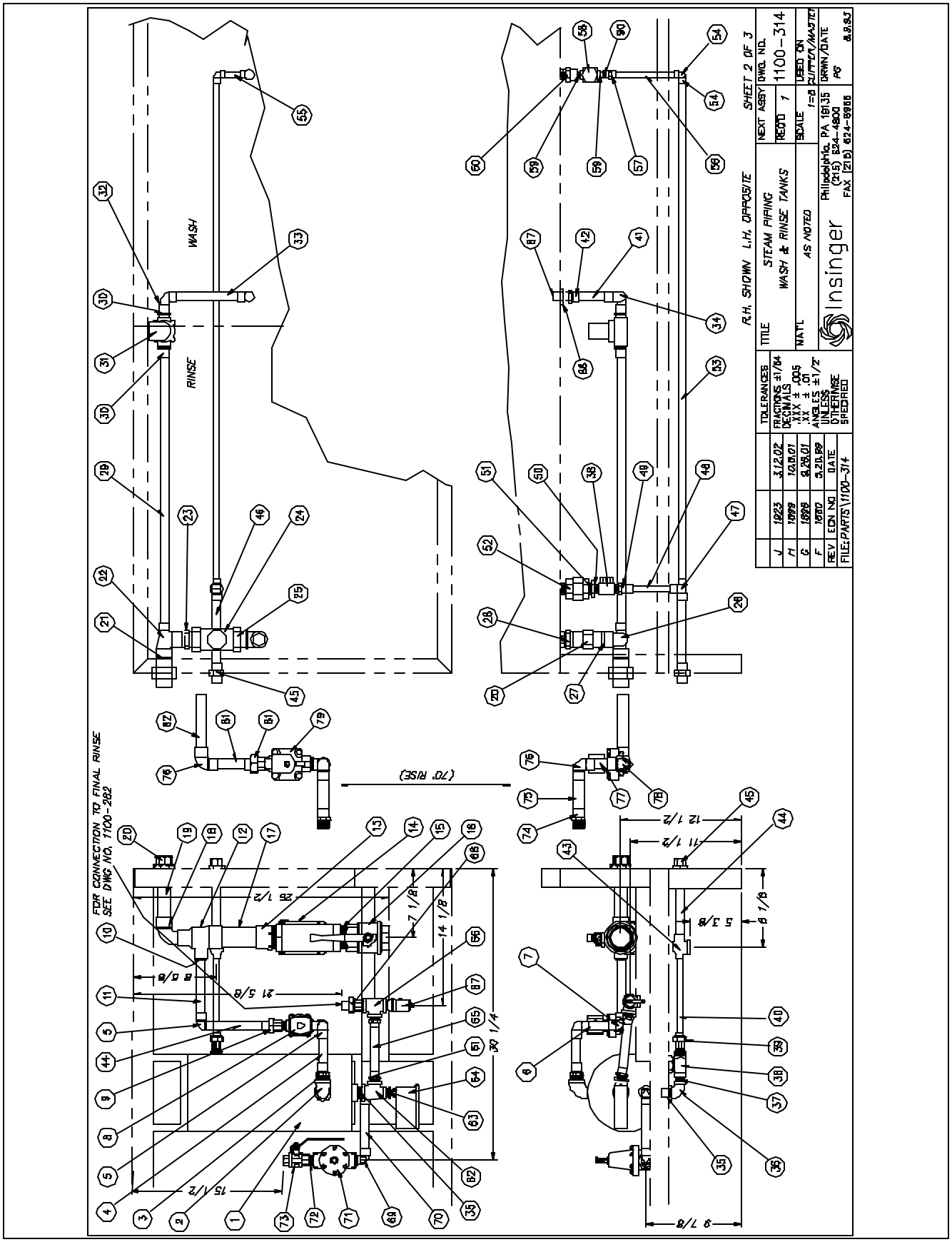
NEXT ASSY	
DWG. NO.	1105-72
REQ'D	1
SCALE	1=8
USED ON	CLIPPER/MASTER
DRWN/DATE	PG 11.8.93

SHEET 3 OF 3



			TOLERANCES	TITLE STEAM SILENCER ASSEMBLY	NEXT ASSY	DWG. NO.
			FRACTIONS ±1/64 DECIMALS .XXX ± .005 .XX ± .01 ANGLES ±1/2" UNLESS OTHERWISE SPECIFIED		REQ'D 1	199-76
				MAT'L	SCALE FULL	USED ON ENSIGN 40-2
REV	ECN NO	DATE		Insinger Philadelphia, PA 19135 (215) 624-4800 FAX (215) 624-6966		DRWN/DATE AP 4.18.87
FILE: PARTS\199-76						


WASH
RINSE
UNLOAD
DRAIN & MACHINE
1 1/16 DIA. (2)
1 5/16 DIA. (2)
23"
12"
4 1/2"
3 1/4"
6 1/4"
3 1/4"
8 1/2"
2"
8"
A
VIEW A – A
R.H. SHOWN – L.H. OPPOSITE
SHEET 1 OF 3
TITLE
STEAM PIPING
WASH & RINSE TANKS
NEXT ASSY
DWG. NO.
1100–314
REQ'D 1
SCALE 1=8
USED ON CLIPPER/MASTER
MAT'L AS NOTED
DRWN/DATE PG
Insinger
Philadelphia, PA 19133
(215) 824–4800
FAX (215) 824–4956
TOLERANCES
FRACTIONS ±1/64
DECIMALS .XXX ± .005 .XX ± .01
ANGLES ±1/2°
UNLESS OTHERWISE SPECIFIED
REV ECN NO. DATE
J 19237 3.12.02
H 18398 10.8.01
G 18396 11.28.01
F 19260 3.27.02
FILE: PARTS\1100–314


WASH
RINSE
R.H. SHOWN L.H. OPPOSITE
SHEET 2 OF 3
TITLE
STEAM PIPING
WASH & RINSE TANKS
NEXT ASSY
1100-314
SCALE
AS NOTED
MATL
TOLERANCES
FRACTIONS ±1/64
DECIMALS
.XXX ± .005
.XX ± .01
ANGLES ±1/2°
UNLESS
OTHERWISE
SPECIFIED
Insinger
Philadelphia, PA 19135
(215) 624-4800
FAX (215) 624-6966
FOR CONNECTION TO FINAL RINSE
SEE DWG NO. 1100-282
(70° RISE)
25 1/2
21 5/8
14 1/8
7 1/8
15 1/2
12 1/2
11 1/2
9 7/8
8 1/8
5 3/8

ITEM	PART NO.	DESCRIPTION	QTY.
61	D317A-E3-E2	ADAPTOR 3/4C X 3/4MIPS	2
62	D320F-F1D1E1	TEE 7" FIPS X 1/2 FIPS X 3/4 FIPS	1
63	D322F-D2-C1	HEX RED 1/2 MIPS X 3/8 FIPS	1
64	D2396	THERMOSTAT (SEE NOTE 2)	1
65	D207A-B6-16	COPPER TUBING 3/4CTS X 4"LG	1
66	D320F-E1E1E1	TEE 3/4 IPS	1
67	D2547	PRESSURE RELIEF VALVE 3/4 IPS	1
68	D318A-E3-E2	UNION 3/4 C X 3/4 MIPS	1
69	D316A-E3-E2	90° ELBOW 3/4 C X 3/4 MIPS	2
70	D207A-B6-24	COPPER TUBING 3/4 CTS X 6	1
71	D2508	PRESS REG & STRAINER 3/4 IPS	1
72	D314F-EC-00	NIPPLE CLOSE 3/4 IPS	1
73	D2340	BALL VALVE 3/4 IPS	1
74	D317A-F3-F2	ADAPTER 1' C X 1" MIPS	1
75	D207A-B8-13	COPPER TUBING 1" CTS X 3 1/4	1
76	D316A-F3-F3	90° ELBOW 1" C X 1" C	1
77	D207A-B8-15	COPPER TUBING 1" CTS X 3 3/4	1
78	D316A-F3-F2	90° ELBOW 1" C X 1" MIPS	1
79	D2772	SOLENOID VALVE 1" IPS	1
80	D318A-F3-F2	UNION 1" C X 1" MIPS	1
81	D207A-B8-18	COPPER TUBING 1" CTS X 4 1/2	1
82	D207A-B8-24	COPPER TUBING 3/4CTS X 6"LG	1
83	1100-84	STEAM COIL - WASH	1
84	9079-07	STEAM COIL - RINSE	1*
	9019-02	STEAM COIL - RINSE	1**
85	D326F-F7	LOCKNUT 1" IPS	2
86	D326F-E1	LOCKNUT 3/4 IPS	2
87	D314F-EA-14	NIPPLE 3/4 IPS X 1 3/4 ALL THD.	2
88	D314F-FA-16	NIPPLE 1" IPS X 2" ALL THD.	1
89	D314F-EL-52	NIPPLE 3/4 IPS X 8 1/2 LGE	1
90	D323F-D2-C1	RED. BUSH. 1/2 MIPS X 3/8 FIPS	1
91	1100-315	PIPE SUPPORT	1

FOR 78" RISE

ITEM	PART NO.	DESCRIPTION	QTY.
31	D2585	SOLENOID VALVE 3/4 IPS	1
32	D316A-E3-E4	90° ELBOW 3/4 C X 3/4 FTG	1
33	D207A-B6-32	COPPER TUBING 3/4 CTS X 8	1
34	D316A-E3-E3	90° EL 3/4C X 3/4C	1
35	D314F-EC-00	CLOSE NIPPLE 3/4 IPS	1
36	D316F-E2-D2	90° RED ELL 3/4FIPS X 1/2FIPS	1
37	D314F-DC-00	CLOSE NIPPLE 1/2 IPS	1
38	D2102A	STEAM TRAP 1/2 IPS	2
39	D318A-D3-D2	UNION 1/2 C X 1/2 MIPS	1
40	D207A-B4-33	COPPER TUBING 1/2 CTS X 8 1/4	1
41	D207A-B6-16	COPER TUBING 3/4CTS X 4"LG	1
42	D317A-E3-E1	ADAPTER 3/4C X 3/4FIPS	1
43	D320A-E3D3E1	TEE 3/4 C X 1/2 C X 3/4 FIPS	1
44	D207A-B6-28	COPPER TUBING 3/4 CTS X 7	1
45	D318A-E3-E3	UNION 3/4 C	1
46	D207A-B6-28	COPPER TUBING 3/4CTS X 7LG	1
47	D320A-E3D3E3	TEE 3/4 C X 1/2 C X 3/4 C	1
48	D207A-B6-21	COPPER TUBING 3/4 CTS X 5 1/4	1
49	D317A-E3-D2	ADAPTER 3/4 C X 1/2 MIPS	1
50	D314F-DC-00	NIPPLE CLOSE 1/2 IPS	1
51	D322F-F2-D1	HEX RED 1" MIPS X 1/2 FIPS	1
52	D318F-F1-F1	UNION 1" IPS	1
53	D207A-B4-213	COPPER TUBING 1/2 CTS X 53 1/4	1*
	D207A-B4-261	COPPER TUBING 1/2 CTS X 65 1/4	1**
54	D316A-D3-D3	90° ELBOW 1/2 C	2
55	D207A-B4-9	COPPER TUBING 1/2 CTS X 2 1/4	1
56	D207A-B4-32	COPPER TUBING 1/2 CTS X 8	1
57	D318A-D3-D1	UNION 1/2 C X 1/2 FIPS	1
58	D2102	STEAM TRAP 3/8 IPS	1
59	D314F-CC-00	NIPPLE CLOSE 3/8 IPS	2
60	D321F-E1-C1	RED COUPLING 3/4 FIPS X 1/8 FIPS	1

FOR 40" RISE

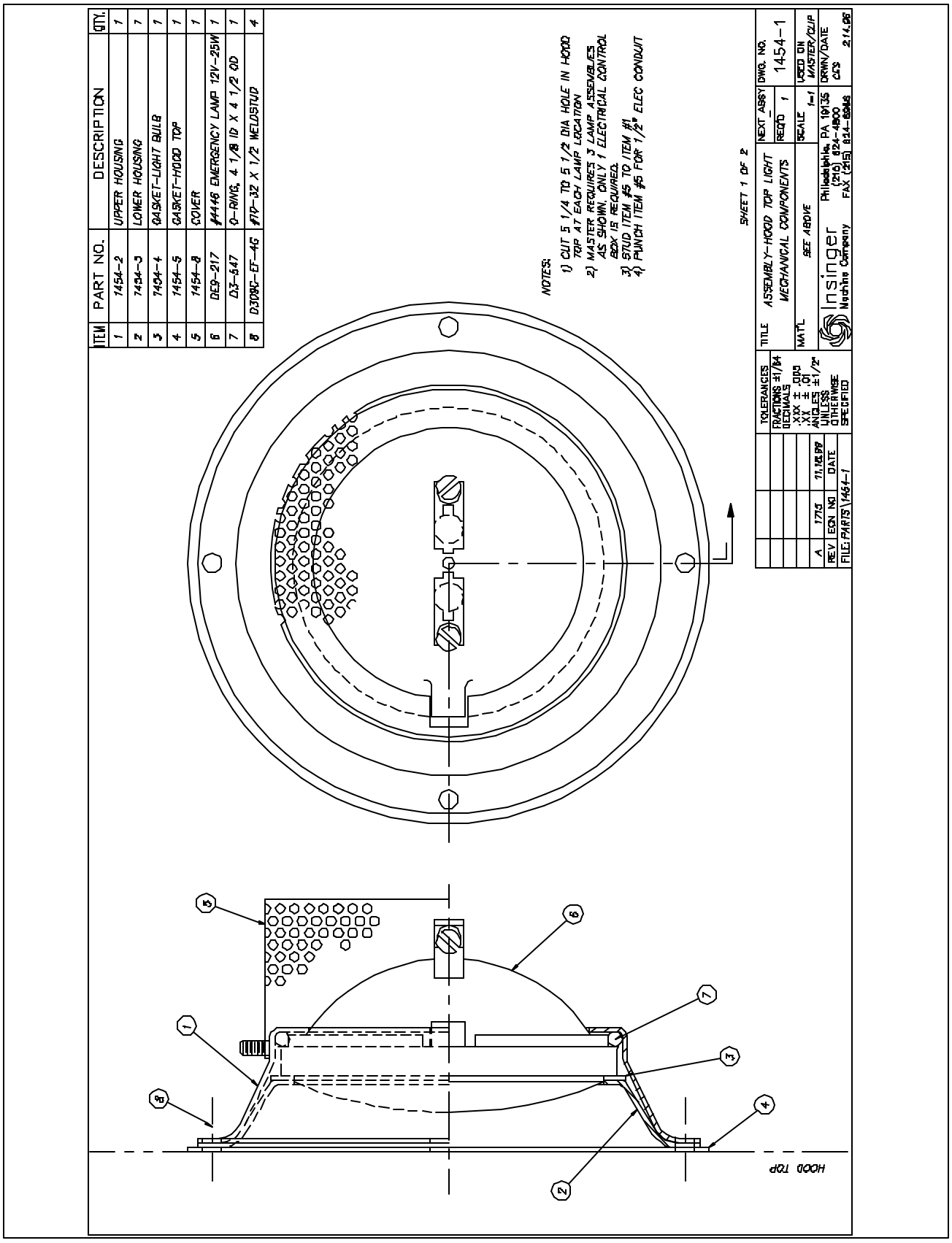
ITEM	PART NO.	DESCRIPTION	QTY.
1	D2100	STEAM BOOSTER (1-2) (SEE NOTE #1)	1
2	D316F-F1-F2	90° STREET ELL 1" FIPS X 1" MIPS	1
3	D317A-E3-F2	ADAPTER 3/4 C X 1" MIPS	1
4	D207A-B6-16	COPPER TUBING 3/4 CTS X 4"	1
5	D316A-E3-E3	90° ELL 3/4 C	2
6	D207A-B6-14	COPPER TUBING 3/4 CTS X 3 1/2	1
7	D318A-E3-E2	90° ELBOW 3/4 C X 3/4 MIPS	1
8	D2595	SOLENOID VALVE 3/4 IPS	1
9	D318A-E3-E2	UNION 3/4 C X 3/4 MIPS	1
10	D323A-F4-E3	FLUSH BUSHING 1"FTG X 3/4C	1
11	D207A-B6-28	COPPER TUBING 3/4 CTS X 7"	1
12	D320A-J3C3F3	TEE 2 C X 1 1/4 C X 1"C	1
13	D317A-J5-J2	ADAPTER 2 C X 2 MIPS	1
14	D2766	"Y" STRAINER 2" IPS	1
15	D314F-JC-00	NIPPLE CLOSE 2" IPS	1
16	D2757	BALL VALVE 2" IPS	1
17	D207A-B16-24	COPPER TUBING 2"CTS X 6"	1
18	D316A-G3-G4	90° STREET EL 1 1/4C X 1 1/4FTG	1
19	D207A-B10-23	COPPER TUBING 1 1/4 CTS X 5 1/4	1
20	D318A-G3-G3	UNION 1 1/4 C X 1 1/4 C	2
21	D207A-B10-10	COPPER TUBING 1 1/4 CTS X 2 1/2	1
22	D320A-G3E3G3	TEE 1 1/4 C X 3/4 C X 1 1/4 C	1
23	D317A-G4-G2	ADAPTER 1 1/4 FTG X 1 1/4 MIPS	1
24	D2470	SOLENOID VALVE 1 1/4 IPS	1
25	D314F-GS-16	NIPPLE 1 1/4 IPS X 2	1
26	D316A-GJ-G1	90° ELBOW 1 1/4 C X 1 1/4 FIPS	1
27	D207A-B10-12	COPPER TUBING 1 1/4 CTS X 3	1
28	D317A-G3-F1	ADAPTER 1 1/4 C X 1" FIPS	1
29	D207A-B6-116	COPPER TUBING 3/4 CTS X 29	1*
	D207A-B6-164	COPPER TUBING 3/4 CTS X 41	1**
30	D318A-E3-E2	COPPER UNION 3/4 C X 3/4 MIPS	2

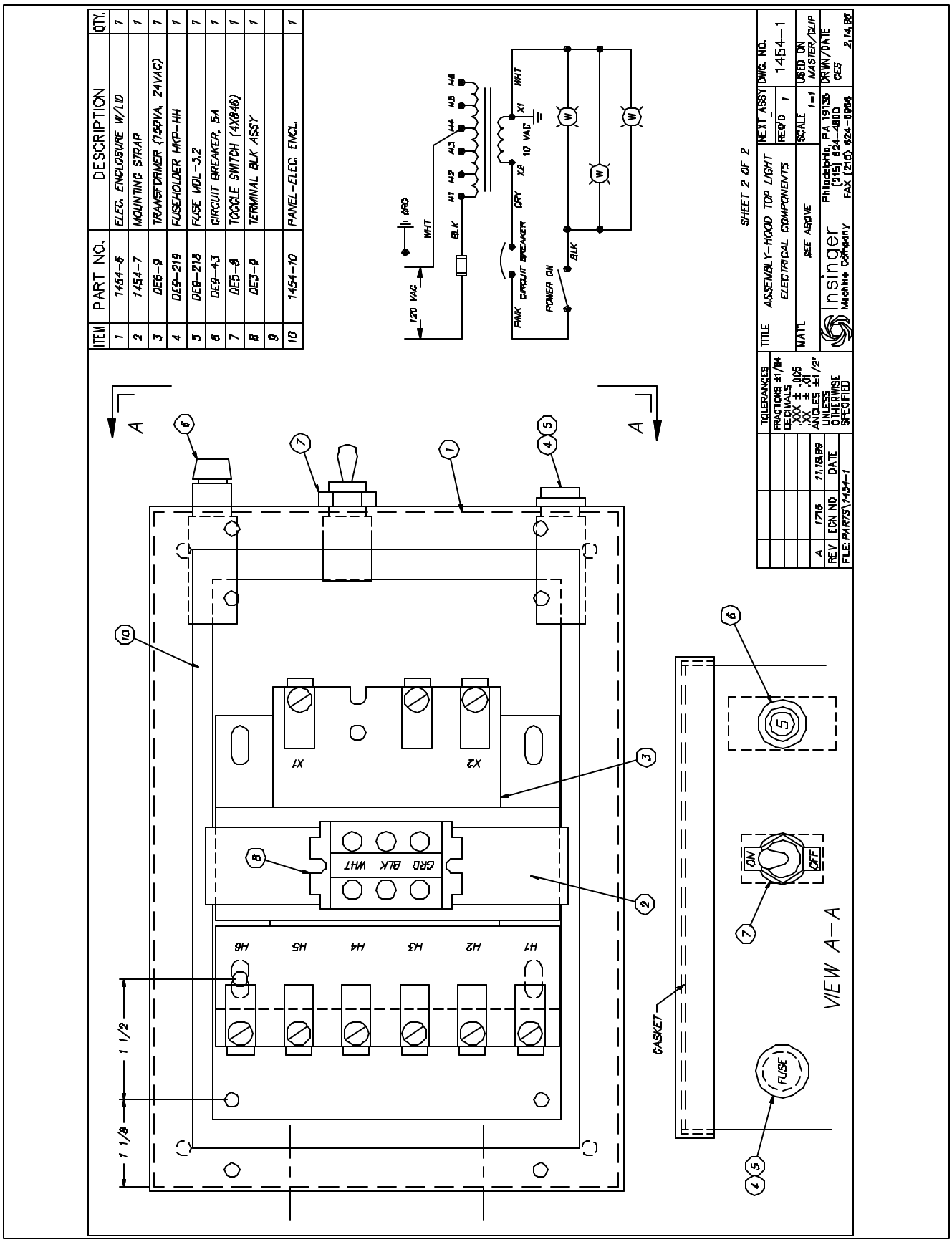
NOTE :
1. (ITEM #1) ADD SUFFIX "NM" FOR NON-MAGNETIC MACHINES.
2. (ITEM #64) USE PART NO. D2396 AS STANDARD AND PART NO. D2301 WHEN LOW TEMP. CUT-OFF IS SPECIFIED.

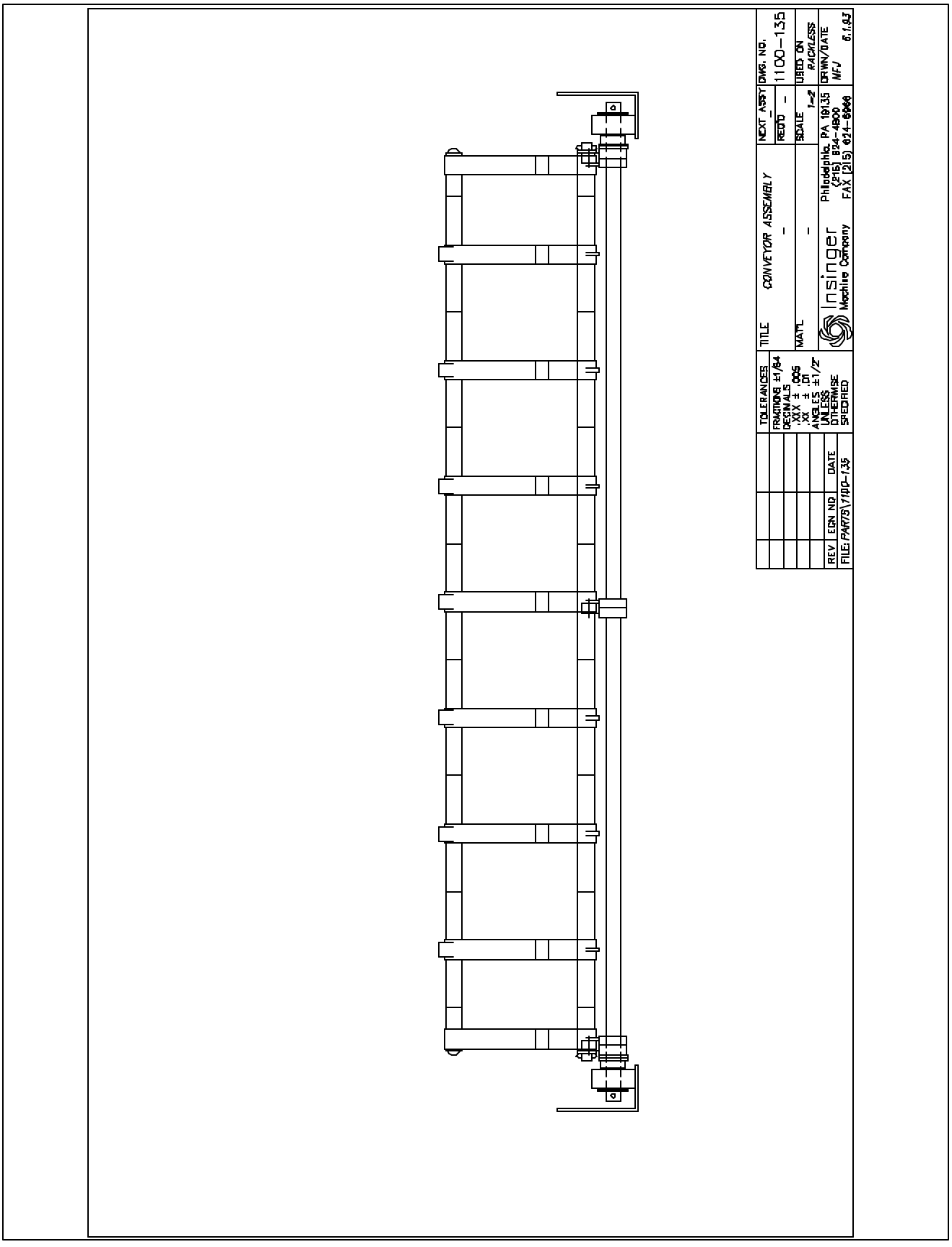
* FOR CLIPPER ONLY
** FOR MASTER ONLY

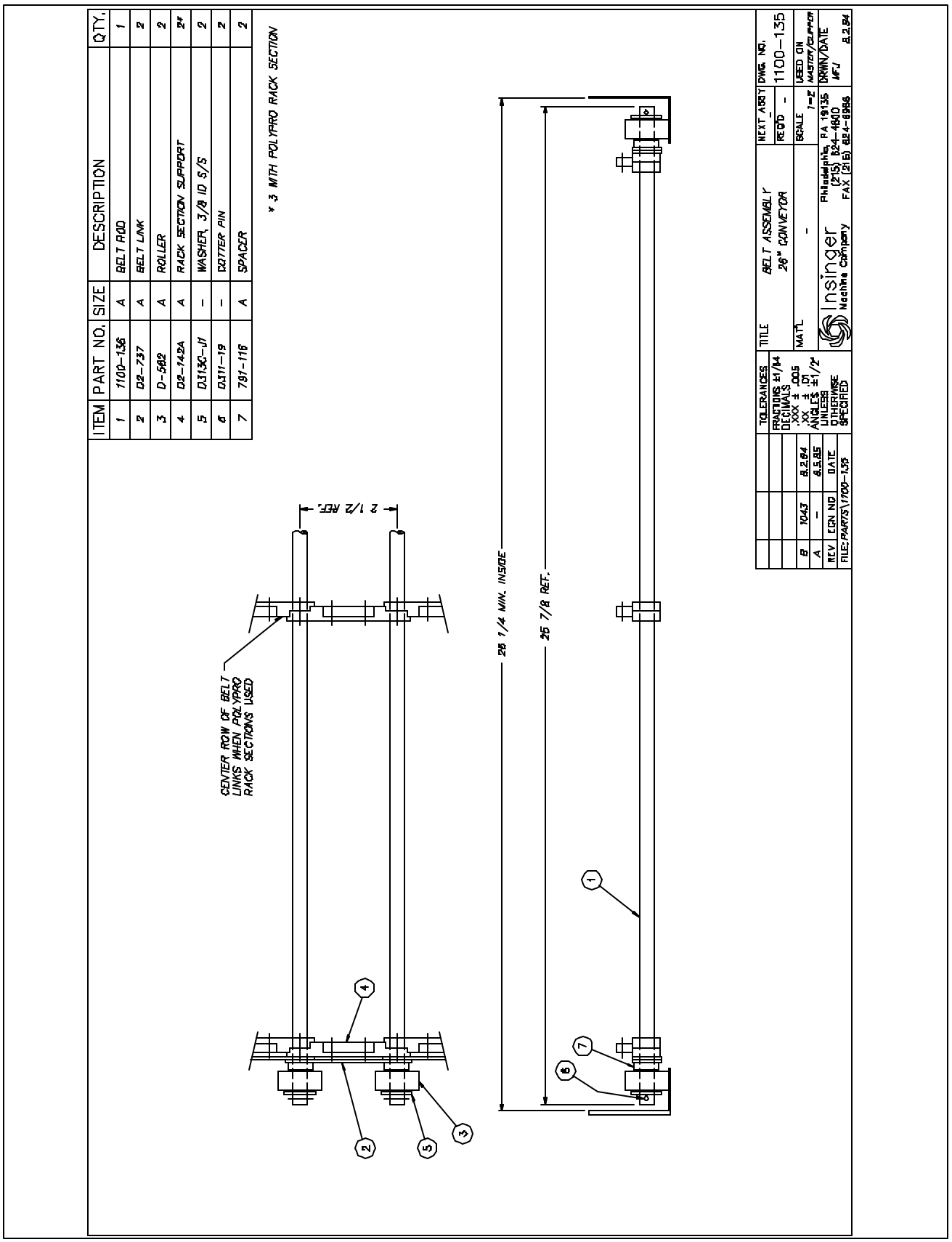
SHEET 3 OF 3

			TOLERANCES	TITLE	NEXT ASSY	DWG. NO.
J	1923	3.12.02	FRACTIONS ±1/64	STEAM PIPING		
H	1899	10.8.01	DECIMALS	WASH & RINSE TANKS	REQ'D 1	1100-314
G	1896	9.26.01	.XXX ± .005			
F	1680	6.20.88	.XX ± .01	MAT'L AS NOTED	SCALE 1=8	USED ON CLIPPER/MASTER
REV	ECN NO	DATE	ANGLES ±1/2°			
FILE: PARTS\1100-314			UNLESS OTHERWISE SPECIFIED	Insinger Philadelphia, PA 19136 (215) 624-4800 FAX (215) 624-8966		DRWN/DATE RC 8.8.97

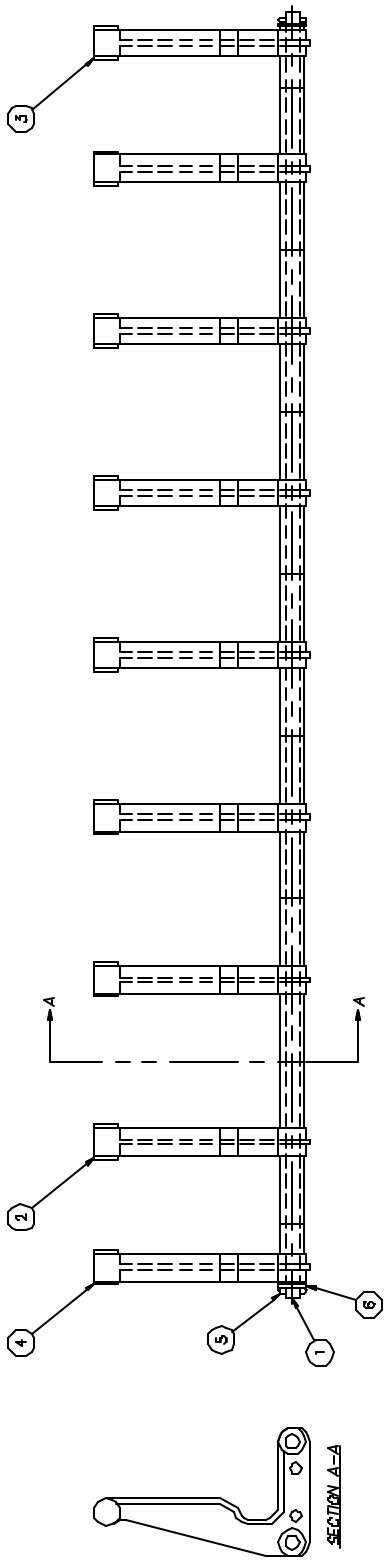

ITEM | PART NO. | DESCRIPTION | QTY.
1 | 1454-2 | UPPER HOUSING | 1
2 | 1454-3 | LOWER HOUSING | 1
3 | 1454-4 | GASKET-LIGHT BULB | 1
4 | 1454-5 | GASKET-HOOD TOP | 1
5 | 1454-8 | COVER | 1
6 | DE9-217 | #4446 EMERGENCY LAMP 12V-25W | 1
7 | D3-547 | O-RING, 4 1/8 ID X 4 1/2 OD | 1
8 | D3082-EF-4G | #10-32 X 1/2 WELDSTUD | 4
NOTES:
1) CUT 5 1/4 TO 5 1/2 DIA HOLE IN HOOD TOP AT EACH LAMP LOCATION
2) MASTER REQUIRES 3 LAMP ASSEMBLIES AS SHOWN. ONLY 1 ELECTRICAL CONTROL BOX IS REQUIRED.
3) STUD ITEM #5 TO ITEM #1
4) PUNCH ITEM #5 FOR 1/2" ELEC CONDUIT
SHEET 1 OF 2
TOLERANCES
FRACTIONS ±1/64
DECIMALS
.XXX ± .005
.XX ± .01
ANGLES ±1/2°
UNLESS OTHERWISE SPECIFIED
TITLE
ASSEMBLY-HOOD TOP LIGHT
MECHANICAL COMPONENTS
MATL
SEE ABOVE
SCALE
1=1
NEXT ASSY
REQD 1
DWG. NO.
1454-1
USED ON
MASTER/CLIP
DRWN/DATE
CCS 2.14.95
insinger
Machine Company
Philadelphia, PA 19135
(215) 624-4500
FAX (215) 624-4545
REV
A
ECN NO
1775
DATE
11.16.99
FILE: PARTS\1454-1
HOOD TOP


ITEM | PART NO. | DESCRIPTION | QTY.
1 | 1454-6 | ELEC. ENCLOSURE W/LID | 1
2 | 1454-7 | MOUNTING STRAP | 1
3 | DE6-9 | TRANSFORMER (75RVA, 24VAC) | 1
4 | DE9-219 | FUSEHOLDER MKP-HH | 1
5 | DE9-218 | FUSE MDL-3.2 | 1
6 | DE9-43 | CIRCUIT BREAKER, 5A | 1
7 | DE5-9 | TOGGLE SWITCH (4X8W6) | 1
8 | DE3-9 | TERMINAL BLK ASSY | 1
10 | 1454-10 | PANEL-ELEC. ENCL. | 1
SHEET 2 OF 2
TITLE ASSEMBLY-HOOD TOP LIGHT
ELECTRICAL COMPONENTS
NEXT ASSY
REQ'D 1
SCALE 1=1
USED ON MASTER/CLIP
DWG. NO. 1454-1
DRWN/DATE CES 2.14.00
Insinger Machine Company
Philadelphia, PA 19139
(215) 624-4800
FAX (215) 624-8958
TOLERANCES
FRACTIONS ±1/64
DECIMALS .XXX ± .005 .XX ± .01
ANGLES ±1/2°
UNLESS OTHERWISE SPECIFIED
A 1716 11.18.99
REV ECN NO DATE
FILE: PARTS\1454-1
120 VAC
GRD
WHT
BLK
H1 H2 H3 H4 H5 H6
X1 X2
10 VAC
GRY
CIRCUIT BREAKER
POWER ON
BLK
PINK
W
A
A
X1
X2
GRD BLK WHT
H1 H2 H3 H4 H5 H6
1 1/2
1 1/8
VIEW A-A
GASKET
ON
OFF
FUSE


TOLERANCES
FRACTIONS ±1/64
DECIMALS
.XXX ± .005
.XX ± .01
ANGLES ±1/2°
UNLESS OTHERWISE SPECIFIED
REV
ECN NO
DATE
FILE: PARTS\1100-135
TITLE CONVEYOR ASSEMBLY
MATL -
insinger Machine Company
Philadelphia, PA 19135
(215) 824-4800
FAX (215) 624-6960
NEXT ASSY -
REQ'D -
SCALE 1=2
DWG. NO. 1100-135
USED ON RACKLESS
DRWN/DATE MFJ 6.1.93


ITEM | PART NO. | SIZE | DESCRIPTION | QTY.
1 | 1100-136 | A | BELT ROD | 1
2 | 02-737 | A | BELT LINK | 2
3 | D-582 | A | ROLLER | 2
4 | 02-742A | A | RACK SECTION SUPPORT | 2*
5 | D3136-H | - | WASHER, 3/8 ID S/S | 2
6 | D3111-19 | - | COTTER PIN | 2
7 | 791-116 | A | SPACER | 2
* 3 WITH POLYPRO RACK SECTION
TOLERANCES
FRACTIONS ±1/64
DECIMALS .XXX ± .005
.XX ± .01
ANGLES ±1/2°
UNLESS OTHERWISE SPECIFIED
TITLE
BELT ASSEMBLY
26" CONVEYOR
MATL -
Insinger Machine Company
Philadelphia, PA 19135
(215) 624-4800
FAX (215) 624-6986
NEXT ASSY
REQD -
SCALE 1=2
DWG. NO.
1100-135
USED ON
MASTER/CLIPPER
DRAWN/DATE
MFJ 8.2.84
REV. ECN NO. DATE
A - 6.5.85
B 1043 8.2.84
FILE: PARTS\1100-135
2 1/2 REF.
CENTER ROW OF BELT LINKS WHEN POLYPRO RACK SECTIONS USED
28 1/4 MIN. INSIDE
26 7/8 REF.

ITEM	PART NO.	SIZE	DESCRIPTION	QTY.
1	1100-138	A	RACK SECTION ROD, LOWER	2
2	02-5369	A	PEG	7
3	02-535J	A	END PEG	1
4	02-536K	A	END PEG	1
5	02-852	A	ROD PIN	2
6	02-738	A	RACK SECTION PLATE	2



REV	ECN NO	DATE
C	879	3.6.97
B	-	1.2.84
A	-	11.8.84

FILE: PARTS\1100-139

TOLERANCES
FRACTIONS ±1/64
DECIMALS
.XX ± .005
.XXX ± .001
ANGLES ±1/2°
UNLESS
OTHERWISE
SPECIFIED

TITLE
POLY PEG
RACK SECTION

MATL -

Insinger
Philadelphia, PA 19135
(215) 624-4800
FAX (215) 624-9986

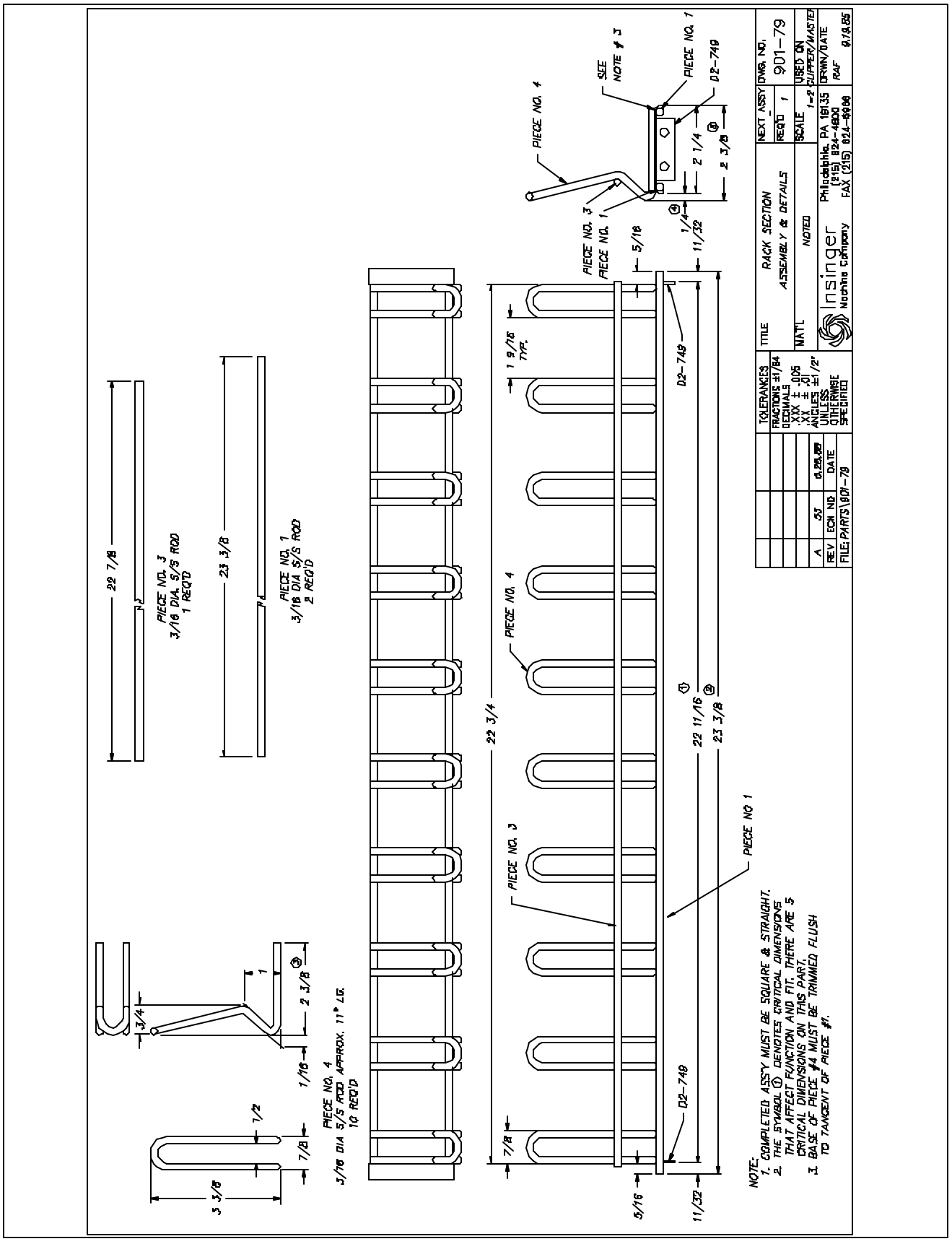
NEXT ASSY -
REQD 1

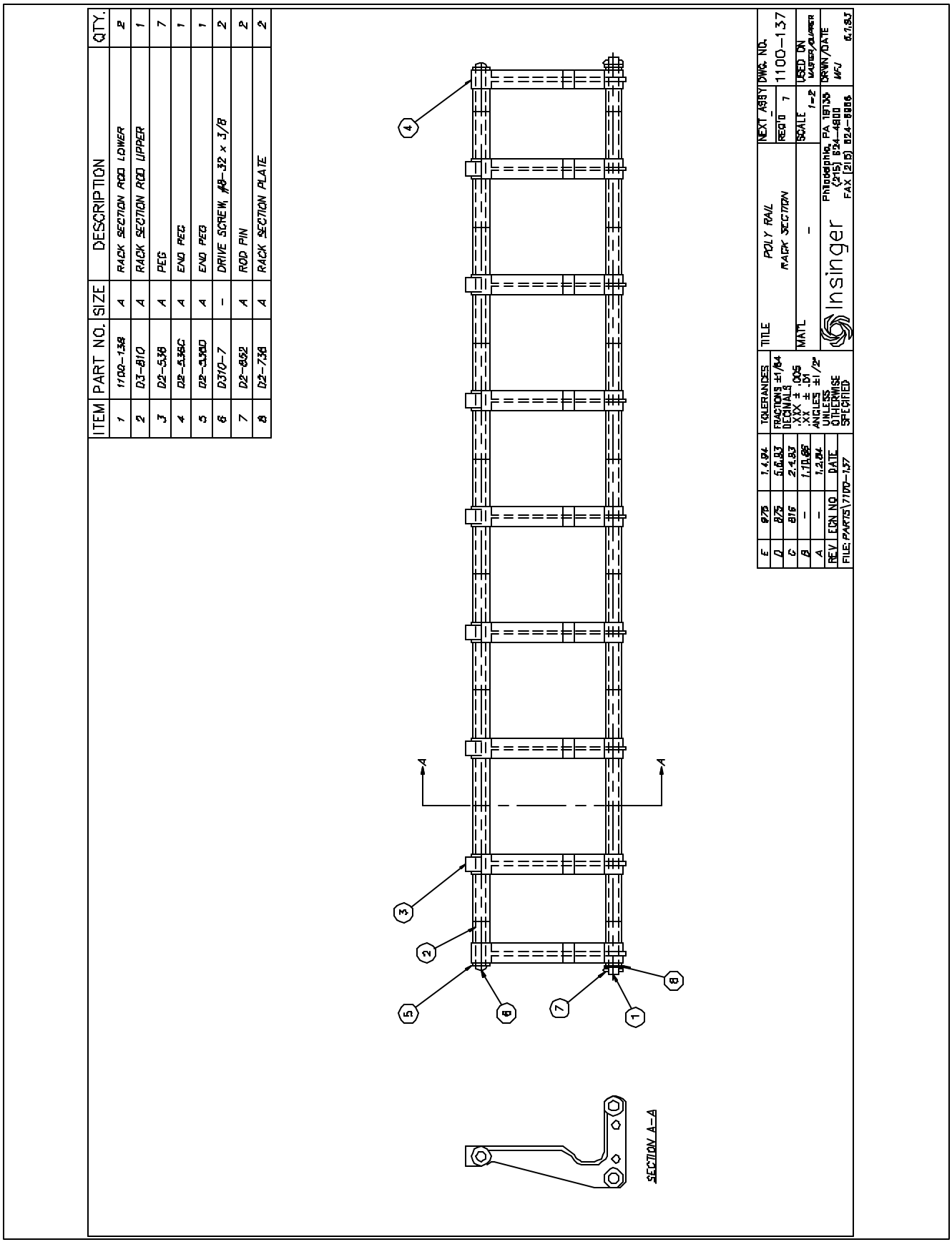
SCALE 1=2

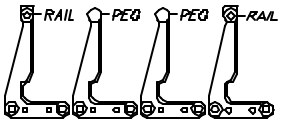
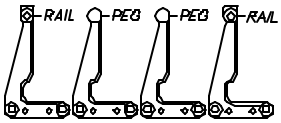
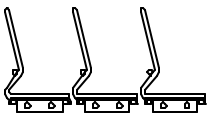
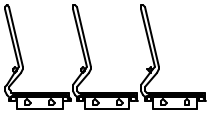
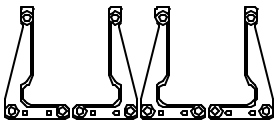
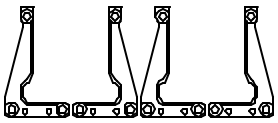
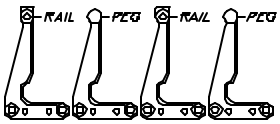
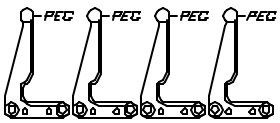
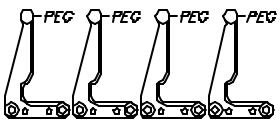
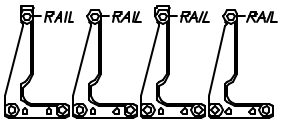
DWG. NO. 1100-139

USED ON MASTER/CLIPPER

DRWN/DATE MFJ 6.7.85


PIECE NO. 3
3/16 DIA. S/S ROD
1 REQ'D
22 7/8
PIECE NO. 1
3/16 DIA S/S ROD
2 REQ'D
23 3/8
PIECE NO. 4
3/16 DIA S/S ROD APPROX. 11" LG.
10 REQ'D
3/4
1
2 3/8
1/16
1/2
7/8
3 3/8
PIECE NO. 4
PIECE NO. 3
PIECE NO. 1
SEE NOTE # 3
D2-749
2 1/4
2 3/8
1/4
11/32
5/16
1 9/16 TYP.
22 3/4
22 11/16
23 3/8
NOTE:
1. COMPLETED ASSY MUST BE SQUARE & STRAIGHT.
2. THE SYMBOL Ⓣ DENOTES CRITICAL DIMENSIONS THAT AFFECT FUNCTION AND FIT. THERE ARE 5 CRITICAL DIMENSIONS ON THIS PART.
3. BASE OF PIECE #4 MUST BE TRIMMED FLUSH TO TANGENT OF PIECE #1.
TOLERANCES
FRACTIONS ±1/64
DECIMALS
.XX ± .005
.XX ± .01
ANGLES ±1/2°
UNLESS OTHERWISE SPECIFIED
TITLE
RACK SECTION
ASSEMBLY & DETAILS
MAT'L
NOTED
Insinger
Machine Company
Philadelphia, PA 19135
(215) 824-4800
FAX (215) 824-9900
NEXT ASSY
REQ'D 1
SCALE 1=2
DWG. NO.
901-79
USED ON
CLIPPER/MASTER
DRWN/DATE
RAF 9.19.85
REV. A
ECN NO. 55
DATE 6.25.87
FILE: PARTS\901-79


ITEM | PART NO. | SIZE | DESCRIPTION | QTY.
1 | 1100-138 | A | RACK SECTION ROD LOWER | 2
2 | 03-810 | A | RACK SECTION ROD UPPER | 1
3 | 02-538 | A | PEG | 7
4 | 02-538C | A | END PEG | 1
5 | 02-538D | A | END PEG | 1
6 | 0310-7 | - | DRIVE SCREW, #8-32 x 3/8 | 2
7 | 02-852 | A | ROD PIN | 2
8 | 02-736 | A | RACK SECTION PLATE | 2
TOLERANCES
FRACTIONS ±1/64
DECIMALS
.XX ± .01
.XXX ± .005
ANGLES ±1/2°
UNLESS OTHERWISE SPECIFIED
TITLE
POLY RAIL
RACK SECTION
MATL
-
Insinger
Philadelphia, PA 19135
(215) 624-4800
FAX (215) 624-8816
NEXT ASSY
REQ'D 7
DWG. NO.
1100-137
SCALE 1=2
USED ON
MASTER/CLIPPER
DRWN/DATE
MFJ 6.1.95
E .875 1.4.94
D .875 5.6.93
C .816 2.4.93
B - 1.10.95
A - 1.2.94
REV ECN NO. DATE
FILE: PARTS\1100-137
SECTION A-A

FULL ASSY	DESCRIPTION	BELT ASSY (LESS RACK SECTIONS)	RACK SECTION(S)
A	STND 26" WIDE POLYPRO RACK SECTIONS	1100–135	(1) 1100–137 RAIL (2) 1100–139 PEG 
B	STND 31" WIDE POLYPRO RACK SECTIONS	1426–10	(1) 1426–11 RAIL (2) 1426–12 PEG 
C	STND 26" WIDE S/S RACK SECTIONS	1100–135	901–79 
D	STND 31" WIDE S/S RACK SECTIONS	1426–10	1426–74 
E	SPECIAL 26" WIDE POLYPRO RACK SECTIONS "BACK TO BACK" OMNI & TIVOLI TRAYS	1100–135	ALL 1100–137 RAILS 
F	SPECIAL 31" WIDE POLYPRO RACK SECTIONS "BACK TO BACK" OMNI & TIVOLI TRAYS	1426–10	ALL 1426–11 RAILS 
G	SPECIAL 26" WIDE POLYPRO RACK SECTIONS	1100–135	(7) 1100–137 RAIL (7) 1100–139 PEG 
H	SPECIAL 26" WIDE POLYPRO RACK SECTIONS	1100–135	ALL 1100–139 PEG 
J	SPECIAL 31" WIDE POLYPRO RACK SECTIONS	1426–10	ALL 1426–12 PEG 
K	SPECIAL 26" WIDE POLYPRO RACK SECTIONS (TEHACHAPI CCI)	1100–135	ALL 1100–137 RAIL 

DWG. NO. 1100–380
NEXT ASSY –
REQ'D –
USED ON –
SCALE FULL
DRWN/DATE MFJ 11.29.00
TITLE FLIGHT CONVEYOR ASSEMBLIES
MATL –
Insinger Philadelphia, PA 19135 (215) 624-4800 FAX (215) 624-6460
TOLERANCES FRACTIONS ±1/64 DECIMALS .XXX ± .005 .XX ± .01 ANGLES ±1/2° UNLESS OTHERWISE SPECIFIED

REV	ECN NO	DATE
B	1990	8.18.03
A	1984	7.16.01

FILE: PARTS\1100–380

6245 State Road
Philadelphia, PA 19135-2996
800.344.4802
215.624.4800
Fax 215.624.6966